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STATE BOARD OF HEALTH OF FLORIDA

TWENTY-FIFTH
ANNUAL REPORT

OF THE

State Board of Health
of Florida

1913

APPROVED BY THE BOARD IN ANNUAL
SESSION, MARCH 5-6, 1914

JACKSONVILLE, FLORIDA

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PUBLICATION 112

MARCH, 1914

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THE E. O. PAINTER PRINTING CO.
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1914

STATE OF FLORIDA

STATE BOARD OF HEALTH

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TABLE OF CONTENTS

	Page
President's Letter of Transmittal	II
Report of the State Health Officer.....	I
Administration Building and Grounds.....	9
Sanitary Districts of the State.....	9
Communicable Diseases	12
Diphtheria	12
Smallpox	13
Malaria	15
Typhoid Fever	15
Tuberculosis	18
Cerebro-Spinal Meningitis	19
Measles	19
Scarlet Fever	20
Hookworm	20
Hydrophobia	21
Extracts from Minutes of Reorganization Meeting of the State Board of Health	22
Publicity and Publications	23
Office Routine	24
Laboratories	25
Veterinary Work	27
Glanders	27
Public Health Legislation.....	28
Bill for the authorization of common carriers to grant free passage to employees of the State Board of Health.....	28
Cattle Tick Eradication	29
Pollution of Underground Waters.....	30
Finances	32
Auditing and Accounts.....	36
The Expenditures in Detail	38
Receipts	39
Report of Vital Statistician.....	41
The Work and Situation in Florida.....	44
Morbidity Statistics	48

Library	Page
Subsidiary Statistical Data:	50
Hydrophobia—Treatment Administered for its Prevention by the State Board of Health, 1913 (table).....	54
Explanatory Notes	58
Case Record, Deaths from Hydrophobia, 1913.....	58
Distribution of Cases by Counties and Towns (table).....	60
Distribution of Vaccine Points, 1913 (table).....	62
Reported Cases of Smallpox in Florida, 1913 (table).....	63
Prevalence of Diseases as Diagnosed by Laboratories of State Board of Health. (Insert preceding page 65).	
A Study in the Seasonal Prevalence of Typhoid Fever and Malaria as Diagnosed by Laboratories of State Board of Health.....	65
Statement Regarding Seasonal Prevalence of Flies and Mosquitoes in Florida.....	66
Monthly Climatological Summary, Florida, 1913.....	69
Reports of Assistants to the State Health Officer, and County Agents:	
Dr. Charles Wm. Bartlett (Southwestern District).....	73
DeSoto County	77
Hillsborough County	77
Lee County	78
Manatee County	78
Pinellas County	78
Polk County	79
Dr. C. W. D'Alemberte (Western District).....	80
Communicable Diseases Reported.....	80
Fumigations by Sanitary Patrolman.....	80
Deaths from Communicable Diseases.....	81
Santa Rosa County.....	82
Walton County	82
Jackson County	83
Washington County	83
Calhoun County	84
Bay County	84
Escambia County	84
Dr. J. Y. Porter, Jr. (South Tropic District).....	86
Dr. W. P. Crigler (South Central District).....	89
Marion County	90
Citrus County	91

Hernando County	Page
Lake County	91
Sumter County	91
Seminole County	92
Orange County	92
Osceola County	92
Pasco County	93
Dr. J. E. Taylor (West Central District).....	94
Summary of Work and Details.....	95
Report of an Epidemic of Diphtheria at DeFuniak Springs.....	96
Report of Sanitary Conditions of West Central District.....	98
Tallahassee and Leon County.....	98
Monticello and Jefferson County.....	99
Madison and Madison County.....	99
Perry and Taylor County.....	99
Quincy and Gadsden County.....	99
Hosford and Liberty County.....	100
Apalachicola and Franklin County.....	100
Report of Detail to Hosford, Scarlet Fever.....	101
Plans for the Ensuing Year.....	102
Dr. M. E. Heck (East Coast District).....	103
Duval County	108
Clay County	108
St. John County	109
Putnam County	109
Volusia County	110
Brevard County	110
St. Lucie County.....	111
Palm Beach County.....	111
Dr. C. H. Dobbs (Central District).....	114
Table of Contagious Diseases.....	116
Alachua County	120
Baker County	121
Bradford County	122
Columbia County	122
Hamilton County	122
Levy County	123
Suwanee County	123
Dr. E. W. Diggett (On Special Service to Seminole Indians).....	124

	Page
Dr. James M. Jackson, Agent of the State Board of Health, Dade County	137
Dr. D. G. Humphreys, Agent of the State Board of Health, Nassau County	140
Report of Dr. Raymond C. Turck, Surgeon in Charge of the Work Under the "Crippled Children" Act.....	145
Report of Board of Embalmers' Examiners.....	153
Bacteriological Laboratories:	
Report of Dr. Henry Hanson, Senior Bacteriologist.....	161
Drinking Cup	165
Diphtheria Carriers	165
Malaria	166
Typhoid	167
Tuberculosis	167
Hookworm	168
Venereal Disease	168
Water Examinations	168
Pathological Tissues	169
Glanders	169
Laboratory Extension	169
Statement of Specimens Examined (table).....	172
Distribution of Communicable Diseases as Diagnosed by Laboratories of State Board of Health, 1913 (table).....	175
Comparative Statement of the Six Principal Diseases for which Examinations have been made in the Three Laboratories, 1910 to 1913 (table)	178
Tabulation of Patronage	180
Report of Dr. G. H. Simon, Bacteriologist, Tampa Laboratory.....	183
Statement of Specimens Examined in the Tampa Laboratory during 1913 (table)	185
Table of Specimens Examined showing Number received from Various Towns of the State, 1913.....	187
Report of Dr. F. A. Brink, Bacteriologist, Pensacola Laboratory.....	188
Report of Specimens Examined (table).....	190
Veterinary Division:	
Report of Dr. Charles F. Dawson, Veterinarian.....	194
Hog Cholera	195

	Page
Free Serum Distribution	196
Memorial, U. S. Live Stock Sanitary Association.....	198
Financial Report on Hog Cholera Serum Manufacture, Michigan	200
Facts About Hog Cholera Serum and Its Distribution.....	201
List of Hog Cholera Agents of the State Board of Health.....	202
County Farm Demonstration Agents.....	205
Distribution of Hog Cholera Serum in Florida in 1913.....	206
Glanders	217
The New Test for Glanders.....	218
Cases of Glanders during 1913 (table).....	220
A Year's Progress in Tick Eradication Education.....	222
Cattle Dipping Vats Built in Florida in 1913.....	223
Cattle Tick Eradication Bill.....	224
Extra-State Shipments of Cattle	228
Imports of Cattle, Meats, and Meat Food Products during October and November, 1913.....	229
Shipments of Pure-Breds	231
Requirements of Other States for Inter-State Shipments.....	233
Sanitary Requirements of the States Governing Admission of Live-Stock	235
Congress Asked to Prohibit Movement of Ticky Cattle Beyond the Quarantined Area	237
Report of Committee on Uniform Regulations, U. S. Live Stock Sanitary Association	238
List of Live Stock Men in Florida.....	239
Cattle Breeders	239
Swine Breeders	240
Sheep Breeders	240
Range Cattle and Miscellaneous.....	240
Dairymen—General	242
St. Petersburg Dairymen	242
Jacksonville Dairymen	242
Pensacola Dairymen	242
Tampa Dairymen	243
County Cattle Improvement Clubs formed during 1913.....	244
Live Stock Estimates for Florida for 1913 (table).....	245
Report of Dr. W. A. Munsell, Assistant Veterinarian	247

	Page
Data on Glanders Cases.....	248
Details of Hog Cholera Work	248
Cattle Certified for Interstate Shipment.....	249
Investigation of Tick Fever and Special Cases.....	249
Report of Dr. J. W. DeMilly, Assistant Veterinarian.....	250
Appendix	253

ILLUSTRATIONS

	Page
Smallpox Tides (chart).....	following 64
Prevalence of Typhoid and Malaria in Florida, 1913 (chart).....	65
Monthly Normal and Mean Precipitation, Florida, 1913 (chart).....	68
Monthly Normal and Mean Temperatures, Florida, 1913 (chart).....	69
Map of Florida, showing Sanitary Divisions.....	preceding 71
Seminole Indian Hookworm Victims, etc.	preceding 127
Road Through Cypress Swamp—Prominent Seminoles.....	preceding 133
Suggestion for Orthopedic Ward (front elevation).....	preceding 149
Suggestion for Floor Plan of Orthopedic Ward.....	preceding 149
Crippled Children Photographs, Figures 1 to 24.....	following 152

LETTER OF TRANSMITTAL.

PALATKA, FLA., MARCH 5, 1914

HONORABLE PARK TRAMMELL,
Governor of Florida, Tallahassee, Fla.

DEAR SIR:—

The statutes of the State of Florida require that the President of the State Board of Health shall each year certify to the Governor the expenditures of the Board, and forward such recommendations as the Board may think needful to preserve the health of the people; which the Governor may then, in his discretion and wisdom, transmit to the Legislature for its consideration. The Board accepts and approves the report of Dr. Porter, State Health Officer, and commends same to your earnest attention.

As the details of the management of the affairs of the State Board of Health are by law placed under the direct supervision of the State Health Officer, and as he has very amply covered the general subject of health management for the past year in his annual report, I herewith transmit to you a copy of same, inviting your careful reading of what has been accomplished or sought to be accomplished for the betterment of the health conditions in the State. While almost every phase of the management has been dealt with by the State Health Officer and his assistants in the various reports submitted, yet in connection with certain comments which the State Health Officer makes on some much needed modification of the present law, I wish to emphasize what he has stated on these subjects, and to invite your attention to a much desired amendment to the statute requiring the care by the State Board of Health of domestic animals, and more particularly to the provision that animals affected with glanders shall be appraised, destroyed and paid for by the State. It occurs to me, as the State Health Officer has clearly pointed out, not only in his report for 1913, but for previous years, that it is unfair to the taxpayers of the State that an accident of this kind, such as disease

happening among stock, should have to be borne by the entire citizenship, and he very reasonably says that the citrus growers and others interested in agricultural and commercial development of the State, could equally with equity demand payment for loss occurring through destruction of groves by parasitic life, or by visitation of climatological changes. I think, therefore, that, if the present law was amended or a separate enactment passed by the Legislature prohibiting stock entering the State without being certified to by competent federal or state authorities elsewhere, as being free from disease, the practice of dishonest stock dealers to buy tainted animals elsewhere and import them into Florida to be sold at a low price, would be barred, and the practice would be stopped, and the occurrence of glanders in the State would be rare and seldom found.

I would also suggest to you, and recommend strongly, that the present statute requiring that hog cholera serum shall be furnished free to the farmers of the State, be likewise amended to read that it be given at cost price, either as manufactured or as purchased by the State Board of Health. Florida and Illinois are the only two states in the union where this serum is furnished free to the agricultural interests; and there seems to be, to my mind; and also expressed by the full Board, no good reason why the owners of swine herds should not defray the cost of keeping their stock healthy, as they reap the benefit of same.

In this connection I wish to say further, that I do not believe the statute of 1911 authorizing the State Board of Health to assist in the eradication of Texas fever in Florida, contemplates more than the Board assisting in an educational promulgation or dissemination of information, an acceptance of which would insure relief to the cattle raising industry of the State. Most certainly, if the construction of vats and the dipping of cattle will improve the quality and weight of animals, the expense of same should be borne by those who reap the benefit, and not by the entire tax-paying citizenship. If there is ambiguity of construction in the present law in the opinion of the State Board of Health, it is essential that it should be corrected.

I voice the opinion of the other members of the Board when I say that the Board is not only perfectly willing but exceedingly

anxious to promote and advance the health of not only the people of the State, but every industry which the people are directly or indirectly interested in, but the Board feels that, to spend money in the direction of one or two certain industries and not to do so in other directions, would be a discrimination for which they could be justly criticized, and, furthermore, would not be legal.

I am glad to say that the health of the people of the State has been generally good in the past year, and while certain diseases occurring could have been prevented had the people heeded the advice and counsel which the Board freely gave on all subjects concerning public health, by bulletins, pamphlets and other literature, yet it is felt that much improvement has resulted from this educational propaganda, and increasing interest is shown year by year in health matters, which must ultimately result, as the people become better informed and ignorance on the subject is lessened, in a physically improved citizenship.

Very respectfully,

F. J. FEARNSIDE,

President of the State Board of Health.

EXECUTIVE DEPARTMENT
STATE BOARD OF HEALTH OF FLORIDA

REPORT OF THE
STATE HEALTH OFFICER
DR. JOSEPH Y. PORTER

REPORT OF THE STATE HEALTH OFFICER

To the President and Members of the State Board of Health:

In order that a clear understanding and thorough conception of the value and importance of the work of the executive office of the State Board of Health for the past year (1913), may be had by the people of Florida, I herewith transmit to you a concise account of the transactions of my office for the year 1913, with the hope that what has been attempted for the welfare of the State, and what has been accomplished in this respect, may meet with your approval.

It is gratifying to note the growing interest in health matters which is apparent by increasing activity in this direction all over the State for the past several years. There seems to have been an awakening on the part of the citizens of Florida, to the necessity of "doing something" which will lessen sickness and potentially assist the working capacity of the individual. It is appreciated that illness, however slight, decreases the vital ability to accumulate this world's goods, and that health is the greatest asset in the commercial upbuilding of a community or State. It is now recognized, even by those who give but little thought to the subject, that an indifference to certain conditions of living, when allowed to run rampant, invariably brings disaster to a community, but that the progressive citizen and wide-awake community who heeds advice from the health authorities and accepts and acts upon the recommendations, which are always generously given, invariably profits thereby. There is no surer index of this "progressive spirit" than is shown by the general healthful conditions of the State during 1913. While it may appear as a stereotyped phrase to say that "the health of the State for the past year has been excellent," and may be a rather vague assertion when unsupported by statistical figures, yet from correspondence, gathered from different sections and from laboratory reports, it can be stated, I think, without fear of captious contradiction, that the year 1913 has shown a marked

increase in health conditions and an improvement in sanitary advancement, which promises to be not only lasting, but still further becoming better and better. It has been so frequently stated in these reports and in other writings from this office that, after all, the public health is a question alone of individual responsibility, that the saying has become a maxim and adage of the office, for it is recognized that by impressing the individual with this truth, for it is a truth, that with a co-operation established between him and those agents which improve health and lessen sickness, very soon will the whole community be helpers in the work, and somewhat of the cherished anticipation of the sanitarian, become facts.

As Governments are but the aggregation of individual units, it is apparent that the individual must play the important part in its administration, and especially in health conservation. No man liveth unto himself, for in living, by his acts, he establishes an environment which may either be of benefit or detriment to his neighbor. It is indeed gratifying to be able to say to you that there has been less sickness in the State during the past year than for previous years, and that of the special diseases which tend to decrease the working force of the State, such as malaria and typhoid, reports from the several laboratories of the Board all show that there has been a marked lessening of positive specimens sent in for examination and determination, than in former years. The total number of specimens received for examination has been larger and is increasing each year, thus showing an appreciation by the physicians of the State for information which will assist them in a positive and speedy deciding of doubtful cases of sickness. The ratio of positives to the number of specimens examined, however, does show a decrease of positive cases of malaria and typhoid mailed for examination.

Unfortunately, this cannot be said for tuberculosis or for diphtheria. The laboratory records show that there has been a corresponding increase in "positives" for both of these diseases to the ratio of specimens of each disease submitted for examination. Just why diphtheria should have increased in the State during the year, it is impossible to say or to ascribe the cause. It may be that by obtaining fuller records more cases of diphtheria have been learned of, and that in reality no more have occurred, during

the past year, than at other previous seasons, with the possible exception of the outbreak at DeFuniak, which outbreak considerably increased the number of cases brought to the attention of the State Health authorities.

With the migration of consumptives, pulmonary-tuberculosis, from the rigors of a Northern climate to the balmy temperature of this State, the most southern of the United States' continental possessions, it is an extremely difficult matter to accurately ascribe the discrepancy in number of cases from year to year; nor is it thought to be possible that such could be had.

More is learned of the existence of this trouble in the State than formerly, for more specimens are submitted, by physicians and laymen, and a greater dependence is had upon the laboratories of the Board to aid in a well defined diagnosis. And this same statement may well apply to other of the communicable diseases, which the microscope greatly assists the doctors in determining. The reports of the laboratories which are appended and made a part of this recital of events as transpiring during the year, deal with this and other problems connected with communicable disease distribution throughout the State, and will be found to be both interesting and instructive.

It is a deplorable fact, and one much to be regretted, that Florida has not a system of vital statistics which can be made useful in obtaining definite knowledge of the life movement of her people, or which can be used to benefit the State commercially. The failure to have these statistics is in no wise due to an indifference or apathy of the Executive Officer of the Board, or to a lack of persistent effort on his part to obtain this useful and beneficial information, which is necessary to place the State of Florida within the registration area of States in the Census Bureau of the United States Government.

It has frequently been indicated in these reports, and in fact, each year the subject has been brought up and dwelt upon, even from the inception of the Board, now some twenty-five years ago, that until an accurate collection and tabulation could be had of the births and deaths occurring in the State, nothing could be known or learned of the life wave of the people, and that desultory reports.

haphazardly made, were worse than useless, and if published would be misleading and untruthful. In 1899 the Legislature at the instance, and earnest pleading of the State Board of Health, provided for a Bureau of Vital Statistics, with the State Health Officer as Registrar of the same, and authorized the needful machinery to carry into effect the requirements of the Act. Immediately the State Health Officer set about to fulfill the mandate of the law, with an enthusiastic and determined purpose to perfect a system of vital statistics for Florida which would be a credit to the Commonwealth. Plan after plan was devised and tried out, but to no purpose or successful accomplishment. Postal cards addressed to the Board, and an enumeration of diseases, from which deaths were likely to occur, on the reverse side of the card, were mailed to the seven hundred or more physicians known to be, at that time, in the State; and similar cards for births were also printed and distributed. Notwithstanding the fact that through the efforts of the Board the Legislature for several years withheld the State occupation license tax for physicians, yet the majority of the doctors in the State could not be influenced either by appeals to patriotism or State pride to make full returns of the births and deaths occurring under their professional care; and this plan failed. As the demand upon the time of the doctor was slight—for he had only to enter the data on the card and drop it in the postoffice—the idea of remuneration was not considered because of the action of the State in excluding the doctor from the occupation license tax; still, a nominal remuneration of ten cents per name was offered, but not in any wise as a compensation for either time or trouble.

One scheme after another was tried and persisted in, in an attempt to obtain these needed vital statistics, which at that time, it was logically thought could only be accurately gotten through the medical practitioners engaged in the active work of their profession. The Act of the Legislature made it obligatory upon all—whether medical men or not—under whose observation a birth or death came, to make these reports; and, of course, as in all laws of this character, there was a penalty attached to a failure to obey the enactment.

It was repugnant, however, to the State Health Officer, in the first place, to hale any of his professional brethren before a court of law for a failure to fulfill what should be a civic duty, and in

the second place, it would have been exceedingly difficult to obtain evidence that individual practitioners did not report all births and deaths occurring in their practice, without the detective assistance of a corps of inspectors who would travel the State for the purpose of ferreting out the failures; which was not a practical thing to do. Therefore, for several years now the gathering of vital statistics for Florida, other than what has been furnished by the Census Bureau in the decennial tabulation of that branch of the Government, has been dormant, because outside of two cities of the State, nothing sufficiently accurate in this direction could be published without inviting a challenge from statisticians elsewhere who might be studying the subject for comparative investigation and tabulation with other portions or sections of the United States. Key West and Jacksonville were the only two cities in Florida whose vital statistics were considered to be sufficiently accurate by the Census Bureau of the United States to be included in the registration area of cities of the United States.

The vital statistics of Key West was commenced and has been accurately followed since 1874, and those of Jacksonville since the reorganization of the Health Department of this city under the present Health Officer, Dr. C. E. Terry. Recently the subject of vital statistics collection for the State has been revived, and under the authority of the Board another effort is being attempted to procure this needful information; information which has been decidedly wanted by life insurance and immigration companies, whose efforts to promote the development of the State have been seriously hampered by the lack of this data.

In July of this year, circulars were sent to the cities of the State, having a population of 2,000 and over, asking their co-operation in acquiring a record of births and deaths occurring within their municipalities. They were asked to appoint a Registrar of Vital Statistics for the city, who would then receive an appointment from the State Board of Health, and be paid twenty-five cents for each birth and death reported to the Executive Officer, provided such returns came within ninety per cent. of accuracy; this accuracy to be determined by the Census Bureau of the General Government in the division of vital statistics of the Bureau of Commerce and Labor. Twenty-eight cities and towns have favorably replied and accepted the proposition, and the scheme is now being worked out;

but as the subject is an educational one, at least a year will be required to perfect a system which will be trustworthy, and probably it will not be before 1915 that any exact statement can be made of the birth and death rate of these municipalities. In the meantime there will also be an effort made to awaken a desire in the rural settlements to come into the registration area of the State, and so, by degrees, it is hoped that the earnest expectation of the past twenty-five years may become a realized fact, and Florida, progressive in all other respects as regards health management and conditions, may come into her own in being able to state with fact and figures what has always been believed—but only in a general way asserted—to be the healthiest State in the Union of States.

The injury to the State which arises from a defective enumeration of causes of deaths, which is comprised in the subject of vital statistics, is shown in the exclusion by some insurance companies of certain counties in the State, and instructions to their agents to place them—especially the southern counties—in the “interdicted district.” Information has been sought of this office, and is still being daily asked for, concerning the death rate of the State, and more particularly in those portions which, as before stated, some life insurance companies would carry their business into were well defined statistics available. This interdiction is both unreasonable and unjust to localities, because a long experience and a thorough cognizance of health conditions existing over the entire State, covering a period of twenty-five years, has satisfied and proven to the State Health Officer that there is not a section of Florida in which life insurance cannot be safely placed, and to the advantage of the insurance company as well as the insured; but it can be well understood, however, that the acturaries of these companies hesitate to authorize business where no statistical figures of mortality are available or have not been made public. It is apparent, therefore, that it is highly desirable that the stigma of implied unhealthfulness shall be put an end to as soon as possible; and only by published statements supported by figures can this doubt be removed. In a recent press bulletin it was well remarked: “If, as is the case of our own State, misrepresentations of disease areas have been made, vital statistics furnishes the only method of successfully contradicting these misleading and damaging rumors. If it did nothing toward the material welfare of Florida, other than furnish figures

proving that our morbidity and mortality rate is far below the prevalent idea among people who are not acquainted with the facts, it would be worth millions of dollars. But vital statistics does much more than this. It directs the energies of the Board of Health, by showing where the weak places are—where the supervision of the Board is most needed to correct errors of sanitation; it ‘legalizes’ the birth of every child in the State; it prevents to a far greater extent than a superficial consideration of the subject would seem to indicate, certain crimes; and lastly, it puts Florida in line with practically the whole United States, as well as the more enlightened European nations, who have recognized the tremendous importance, and are now rigidly enforcing the accurate collection of such statistics.”

There is still another potent reason why the State should put forth information of this character: Scarcely a day passes or a mail is received that the State Board is not asked concerning the health of this or that section of the State, or whether certain portions do not offer an advantage over another as a residence for certain ailments and physical troubles. Of course the latter requests partake more of information respecting morbidity statistics, than for mortality, for an unhealthful locality is not necessarily one of the greatest mortality, but the two subjects of morbidity and mortality blend so imperceptibly one into the other that a report of health conditions in any community or State is scarcely complete and of value unless it can be stated along with the number of births and deaths, the prevalent causes of sickness in the neighborhood.

Considerable space was devoted in the 1912 annual report of the State Health Officer to the subject of mortality statistics and their importance, which it is hardly necessary now to repeat, although the importance is in no wise lessened by the lapse of a year.

The future of the work judging by the experience of other states as well as from the past in this, shows the need of uniformity, in the end by a state law as I recommended in the annual report for 1904, but at this time by similar ordinances in each of the cities. And here I would say that this uniformity, so much urged by the medical and statistical associations and the United States Census Bureau, and embodied in the model laws for the reporting of births and deaths and of sickness, recommended for

adoption, should be at the basis of the health work of this State, and should be prescribed by statute, so the city and other local health authorities and their regulations will be uniformly co-ordinate with the workings of the State Board of Health.

In view of the past experience with physicians and their disinclination to report deaths, it will, I believe, be necessary that future regulations for such reports place the burden upon the undertakers by requiring a burial permit for the disposition of all human bodies, and that no permit shall be given except upon the filing of a death certificate. This was one of the rules and regulations adopted in 1904, but was not generally enforced. It should now be a part of the ordinance of each city, and should eventually become a state law.

There seems to be no way to enforce necessity of birth registration except by the imposition of the penalties imposed now by city ordinances, and which will hereafter have to be provided by the Legislature in the amended statute suggested, and from the experience in this State while showing leniency towards physicians and the changing attitude of many other states, it seems that in the future to acquire this information, violators should be treated alike and prosecuted without regard to position; but it is sincerely hoped that such extremity may never have to be employed against a Florida doctor.

The favorable sentiment of the public is the ultimate basis upon which the success of this, as well as all progressive movements for the peoples' betterment depends; therefore, a campaign of education with adequate financial support should be waged throughout the State to show the need and uses of vital statistics. The press should be given matter to publish, and asked to urge its readers to see that necessary legislation is enacted, and when enacted, vigorously enforced. Physicians, midwives and all interested, should be sent circulars and pamphlets descriptive of the system and its practice, and "Health Notes" should have a special section devoted to it, with articles and tabulations of reports.

There should be installed proper filing and indexing systems and appliances in accordance with the best modern usages, so the original records may be kept safe from the possibility of destruction by fire or loss by theft or accident, and that they may be readily referred to when inquiries are made and tabulations are compiled.

And there should be sufficient clerical and other help at the disposition of this department to assure the prompt disposal of current details and accurate and full tabulations of reports.

The report of the Statistician of the Board recites some interesting facts connected with the effort of the Board to awaken an interest in this work and describes the progress made.

ADMINISTRATION BUILDINGS AND GROUNDS

During the early part of the year, the concrete steps leading to the porch of the administration building sank as a result of a pile giving away. Owing to the nature of the ground, prior to the erection of the building, a portion of the cement floor in the basement also sank to some extent. Both of these defects were corrected at an expenditure of \$1,000.00.

The building proper never was in any danger of settling, notwithstanding a misleading newspaper article, which criticised unfavorably the construction of the building.

A new refrigerating plant has also been installed in the building to meet the increased needs of the laboratory.

The work of grading the grounds has been completed, and there now remains only a slight amount of work to be done to make the location exceedingly attractive; such as bulkheading Hogan's Creek, putting in a cement roadway, laying the street and sidewalk curb, and setting out shade trees and shrubbery.

SANITARY DISTRICTS OF THE STATE.

In the last annual report mention was made of certain features of the work of the Board which it was thought could be improved upon by separating and placing in charge of assistants, the several sections, who, acting by authority received from the State Health Officer, will direct the management and report directly to him. Realizing the importance of keeping in close touch with the public so as to study and improve health conditions in every part of the State, it was decided by the Board to extend the force of assistants, and to divide the State into sanitary districts, each district to be under the supervision of an appointee to be known as an Assistant to the State Health Officer. The area of these dis-

tricts was based, in a great measure, upon railroad facilities and the quickness and convenience of travel between points. The State was accordingly divided into seven districts having, as nearly as possible, equal population. At the centers of population of each of these divisions, a branch office of the State Board of Health was established with one of the Assistants in charge. In addition to this, at the reorganization of the Board in June, the Board appointed three physicians as Assistants to the State Health Officer, basing the selection upon recommendations as to their thorough familiarity with health conditions in their respective localities, and considering also, the reported active interest and excellent records in public health work of the State, which they were said to have. The State was divided, as stated, into seven districts, with Dr. Charles William Bartlett, with headquarters at Tampa, in the Southwestern District, comprising the counties of Hillsborough, Polk, Pinellas, Manatee, DeSoto and Lee; Dr. C. W. D'Alemberte, with headquarters at Pensacola, in charge of the Western District, comprising the counties of Escambia, Calhoun, Santa Rosa, Walton, Holmes, Jackson, Bay, and Washington; Dr. Joseph Y. Porter, Jr., with headquarters at Key West, in charge of the South Tropic District, comprising the county of Monroe. In the early part of 1913 two field assistants of the State Health Officer, Drs. C. T. Young and E. W. Diggett, resigned from the service of the Board. This was greatly regretted, but as it was represented that they would prefer private practice, their resignations were accepted with the good wishes of the State Health Officer for their future success in the new line of professional work. These resignations left the State Health Officer with but one field assistant, Dr. W. P. Crigler. Dr. Crigler, under the new regime, has been assigned to the division known as the South Central District, with headquarters at Ocala, comprising the counties of Marion, Citrus, Hernando, Pasco, Sumter, Lake, Seminole, Orange and Osceola. With the redistricting of the State this left three vacancies to be filled. Invitations for competitive examinations having been issued, six applicants for these positions appeared, with the result that three were successful: Doctors Joseph E. Taylor, of Augusta, Ga., Maurice E. Heck, of Jacksonville, and Clarence H. Dobbs, of Atlanta, Ga. Dr. Taylor was subsequently assigned to the division known as the West Central District, with headquarters at Tallahassee, and comprising the

counties of Gadsden, Liberty, Franklin, Wakulla, Leon, Jefferson, Madison, Taylor, LaFayette; Dr. Heck to the division known as the East Coast District, with headquarters at St. Augustine, comprising the counties of Duval, Clay, St. John, Putnam, Volusia, Brevard, St. Lucie, and Palm Beach; Dr. Dobbs to the division known as the Central District, with headquarters at Gainesville, comprising the counties of Hamilton, Suwannee, Columbia, Baker, Bradford, Alachua, Levy. Each of the Assistants to the State Health Officer will make three regular tours of inspection over their respective districts yearly, submitting report of each trip to the State Health Officer. In addition to this, they are expected to respond to calls to any part of their territory, both when requested directly or directed through the executive office at Jacksonville. It is their duty to constantly study their territory, communicating to the executive office supposed nuisances; to make recommendations; to promote public health administration in municipalities; to co-operate with the executive office in establishing vital statistics in the qualified cities; to suppress and control disease, relying mainly on prophylactic measures; to keep the executive office constantly informed of health conditions and sanitary work in their respective districts; to co-operate with the physicians of their territory, and gain their confidence; to keep abreast of all medical subjects; to submit at the close of each year a complete and detailed statement of the work for the year.

On August 1st of this year, Dr. Hiram Byrd, who had for eight years served the Board as Chief and Office Assistant of the State Health Officer, resigned the position to engage in the field of medical specialism. Dr. Byrd entered the Health Service of the State by competitive examination in 1903, and with an interruption of work of about six months, was constant in his devotion to the health interests of the State, to the date of his resignation. An entertaining speaker and a forcible and interesting teacher, he contributed both in the lecture room and by writings, valuable help in upbuilding the health welfare of the people, as well as popularizing sanitary methods of reform which the State Board of Health is assiduously endeavoring to impress upon the people. The State Health Officer wishes to acknowledge the assistance which he rendered and to commend his work, and likewise to wish him success in any enterprise in which he may engage in the future.

COMMUNICABLE DISEASES.

Until the ideals of living are attained the human organization will be susceptible to illnesses and will be prone to disease. Health boards and sanitary councils can but point out the way and direct how this desired fulfillment can be gotten. They are advisors of the people in this respect, but it is the people themselves who must, by co-operation with these health bodies, ultimately perfect the plans outlined and suggested.

Here again comes in the question of personal and individual responsibility, a theme which has been so frequently dwelt upon and, it is hoped, impressively set forth, in the writings from this office. In the table of communicable diseases, which are at the same time preventable, is enumerated four of the principal maladies of this character with which the Executive Office of the Board has been called upon to deal, either in preventing or suppressing outbreaks of, during the past year: Diphtheria, typhoid fever, smallpox and hydrophobia. The local occurrences, together with the number of cases, are so plainly tabulated that at a glance can be seen where happening.

DIPHTHERIA.

The effectiveness of the Board's policy in the management of diphtheria was again clearly demonstrated in the control of this disease during the past year. As a result "quarantine" must become a thing of the past, and antitoxin, in curative and immunizing doses, and isolation, accepted as the correct course to follow in the control and suppression of diphtheria.

Diphtheria has occurred in epidemic form in several localities, chief of which was the outbreak in DeFuniak Springs. (See report of Dr. J. E. Taylor, Assistant to the State Health Officer.) In the absence of the writer at Havana, owing to danger of introduction of yellow fever, Dr. S. R. Mallory Kennedy, Member of the Board from Pensacola, visited Marianna, Chipley, Ponce de Leon, Bonifay and Caryville, on account of the uneasiness which was felt in these towns, because of nearness to DeFuniak; and also assisted in the epidemic at DeFuniak Springs. The object of this visit to the first named points was to take the situation in

hand; to assure the authorities of the Board's control of the situation; that quarantine was unnecessary, ineffective and forbidden by law, unless authorized by the State Board of Health, and that the disease should be controlled by the liberal use of antitoxin.

In Gainesville, diphtheria was persistently reported during August and September, but did not result in an epidemic owing to the efficient health administration at that point.

A number of diphtheria cases was reported from Lakeland on August 30th; the disease, however, was immediately controlled. So, too, were the cases in the Florida State College for Women at Tallahassee during November, speedily checked. Quite a number of cases of diphtheria were reported in Jacksonville during October and November.

Various other points reporting diphtheria were visited during the year, in each of which it was possible to prevent its spread by the co-operation of the physicians.

Although some misunderstandings have occurred, as to the procedure adopted by the Board for the distribution of diphtheria and tetanus antitoxin to the indigent through the druggists of the State, the scheme is now better understood. During 1913 there were, in this way, 122 indigent patients supplied with and relieved by, diphtheria antitoxin, and six by tetanus antitoxin. In this plan the question of profit is eliminated both by the druggists and the manufacturers in the humane work of furnishing relief to the poor of the State.

As a whole, the management of diphtheria during 1913 has been satisfactory. A table elsewhere shows the distribution of diphtheria as diagnosed by the laboratories of the State Board of Health.

SMALLPOX.

Since the "high-water mark" of 1911, smallpox has been on the decline in the State. In 1911 there were 3,155 cases; in 1912, 1,713 cases were reported; in 1913, it will be seen the number of cases reported dropped to 1,166. Unfortunately, with the drop in the number of cases of smallpox, the number of vaccinations has also dropped, for there is no law making vaccination compulsory in Florida. It holds true that when smallpox is most prevalent, vac-

cination is relatively in demand. In Escambia County, it will be noticed that vaccination was much in demand during the epidemic of smallpox the early part of the year. During March a young white man died from hemorrhagic smallpox in Ocala. Although there were but two cases of smallpox reported in Marion County during that month, the requests for vaccine jumped from none in January and thirty points in February, to 1,290 in the month of March. This demand also held good in other portions of the State where deaths occurred from smallpox.

From this it would seem that, when it comes to a "show-down," all the patient teaching and urging of the State Board of Health for vaccination against smallpox has not been lost, and that these people, like all who let the welfare of their soul and body go astray, seek salvation at the last moment. In 1911 the number of vaccinations was 59,150; in 1912 it decreased to 42,453; in 1913 vaccinations made amounted to 20,398, or less than half for 1912, and about a third of the number done in 1911.

By the plate elsewhere, it will be seen that smallpox occurrence comes in tides. In 1896 the tide was very low, but a little over a hundred cases* being reported in the State. In 1900 the number of reported cases reached approximately three thousand. The number of vaccinations also increased, with the result that the next year smallpox dropped to 1,100 cases, and in 1902 to less than three hundred. In 1905 the number of cases increased to 1,200, but with nearly fifty thousand vaccinations dropped to less than a hundred in 1909. In 1910 smallpox was again on the increase, and in 1911, eleven years from the date of the epidemic of 1900, reached the highest point yet recorded in Florida for one year, 3,155 cases being reported. With some 125,000 vaccinations done since then, smallpox is again on the decrease. It is not actually known how long a successful "take" in vaccination will hold good; often times during a whole life-time, but unless people will awaken to their personal responsibility in the matter of vaccinating against this disease, it may confidently be expected that seven or eight years hence the State will again see a decided recurrence, with resultant great expense and suffering.

*NOTE.—The number of cases of smallpox reported is estimated to be about one half of the cases actually existing.

MALARIA.

Malaria was mostly prevalent during the late summer and early fall, or about the end of the "rainy season." With thirty cases determined in the laboratories for January, the maximum was reached in September, with sixty-five cases, but again dropped with cold weather and frost, to thirty-two cases for November and sixteen in December.

A table showing the distribution of malaria as determined by the laboratories of the State Board of Health, and a curve showing the seasonal prevalence of malaria with reports on prevalence of mosquitoes, and climatology, will be found elsewhere.

On the whole, however, malaria is on the decrease. Dr. Hanson, Senior Bacteriologist of the Board, says there were fewer cases reported this year in his division than last. From various parts of the State, physicians report a decrease in cases. Some are at a loss to account for the decrease, but the more observant claim that screens and the use of mosquito nets, and a larger number of protected porches, seem more in evidence than ever before, and venture the opinion that perhaps this is the reason for the drop.

Screening has been a constant note of appeal by the State Board of Health to the people of Florida, for many years, and it is indeed gratifying to note the decrease of malaria in the State as a probable result of this advice.

TYPHOID FEVER.

Inattention to the vital but simple matter of screening the kitchen and dining room against flies has again claimed the usual toll of sickness and death from typhoid fever. Infection from water supply has been proven unlikely, bacteriological examinations of over two hundred and fifty specimens of water, taken throughout the State, having resulted in but one being found with any evidence of sewage contamination; and that occurred many years ago and was promptly remedied. In the fight against this disease, State-wide laws and ordinances have been enacted. Chapter 6195 of the Laws of Florida, 1911, makes it a misdemeanor to operate any hotel, boarding house or restaurant within the State without

keeping all doors, windows, and other openings in dining rooms and kitchens, or passageways leading thereto, effectively screened. Rule 43 of the Rules and Regulations of the State Board of Health makes it unlawful to keep or maintain horses or mules within five hundred feet of any residence or store in the incorporated towns of the State, except under such conditions as shall effectively prevent the breeding and liberating of flies. This legislation was sought for the purpose of checking the spread of typhoid fever, by screening against and reducing breeding places of flies.

Several cities in the State have passed ordinances making compulsory the fly proofing of all surface closets, and the State Board of Health is working for ordinances of this kind in the other cities. However, during the past year, the fight against typhoid has been conducted mainly through education. The press service of the Board has contained many articles, written in a popular and comprehensive way, which pointed out how typhoid is transmitted by the housefly, and that, to avoid typhoid fever, screening is the most effective measure. In addition, Dr. S. R. Mallory Kennedy, a member of the State Board of Health residing in Pensacola, has contributed valuable educational articles on typhoid fever to the press of the State. At the June meeting of the Board, Rule 1, Reportable Diseases, was amended to include typhoid. Several typhoid outbreaks (and by outbreaks is meant several cases) have occurred during the year. During the month of February typhoid fever was reported from Fort Pierce, St. Lucie County; Bushnell, Sumter County; Wauchula, DeSoto County; and Tallahassee, Leon County. Many anti-typhoid vaccinations were made in these localities at that time, the Board furnishing free this preventive vaccine to the indigent. Tallahassee reported ten cases, the source of infection being traced to flies, which were unusually prevalent in the city at that time. The disease abated after all surface closets were thoroughly cleaned and disinfected to prevent the transmission of the typhoid bacilli by flies, and over one hundred anti-typhoid vaccinations were made. In the village of Holt, Santa Rosa County, typhoid fever appeared in early July. Dr. D'Alemberte, Assistant to the State Health Officer, with headquarters in Pensacola, investigated and found that ten cases had occurred, and gave as the probable source of infection the surface closets

et and housefly, as none of the closets were fly-proof, and none of the houses screened against insect life.

In the 24th Annual Report of the State Board of Health (for 1912) will be found a detailed report of an investigation to determine the source of the unusual prevalence of typhoid fever in Tampa. The disease was at its height during the winter months of 1911-1912, one hundred and eighteen cases being determined during the months of December, January, February and March. From thirty-four cases in March, the number dropped to thirteen in April. May had only five cases, but there was a slight rise during June, with thirteen cases found.

However, in July there was again a material decrease in the number of cases, with a total of four. This low prevalence continued throughout the summer and fall as follows: August 2; September 2; October 7; November 4; but with the beginning of the winter of 1912-13, typhoid fever again took on an increased prevalence, the number of cases suddenly jumping to twenty-nine in December, was at its height in January with forty-three cases, and continued through February and March with fifty-one additional cases for those two months. However, in the spring of 1913, as was the case in 1912, the number of cases grew less. Twenty were reported in April; May, nine; June, eight; July, seven; August, twelve; September, seven; October, eleven; November, sixteen; and December, ten. Following a curve of the prevalence of typhoid fever in Tampa, by number of cases and months, it will be noted that both years are identical in this particular, that from a high point during the winter months, it dropped to a low point during the spring, took a slight upward course during the summer, and dropped again in the fall, but with the advent of the present winter it is indeed gratifying to see the curves take opposite courses. The curve of 1912 took a decided rise, while in 1913 there was a marked drop.

The lesson learned from this cursory study of the subject indicates growing efficiency of public health administration in Tampa. The low number of typhoid cases during December of 1913, has, it is thought, been due to a greater attention paid to the fly question and to surface drainage, and it is thought, therefore, that

the winter of 1913-14 will not repeat the apprehension created from this disease in the two previous winters.

A table showing the distribution of typhoid cases confirmed by the laboratories of the State Board of Health, and curve showing seasonal prevalence of typhoid in Florida for 1913, with study of entomologist's report on the prevalence of flies and a climatological report for 1913, will be found in another part of this report.

TUBERCULOSIS.

The Legislature of 1909 authorized the State Board of Health to acquire and maintain a sanitarium for the treatment of the indigent tuberculous. But the same Legislature diverted \$60,000.00 of the Board's money to the Pension Fund, it was impossible to comply with the permission granted by the Act. As the volume of work in the Board's health administration has increased, and subsequent Legislatures have imposed many other requirements, the expenses have become greater, and the Board has not been able to recoup this deficit.

However, after several years' careful thought, and a close study of the subject, the State Health Officer has arrived at the conclusion that the sanitarium is not the most satisfactory solving of this problem of looking after the indigent tuberculous. In those States where this method has been adopted, many obstacles have been encountered, and much has been said against it; enough, in fact, to more than balance what can be said *for* it, and it falls very short of either the ideal or practical. This opinion has the support of such an eminent authority as Dr. Henry P. Walcott, Chairman of the State Board of Health of Massachusetts, who is considered the leading expert on tuberculosis in that State.

In the first place, it is impossible to gather in all who are suffering from this disease, and those who are unknown and uncontrolled by the State, are creating conditions impossible to counteract.

In the second place, in Florida it is not necessary to house the patient, as it is in the more rigorous climates; therefore, they should not be confined in great buildings, or in small cottages either, of brick or wood, but should live in the open. But open-air sanitarium

require large areas and landed reservations to accommodate races and sexes, with additional space to devote to mild and moderate exercise and occupation in horticultural or agricultural pursuits. Such slight occupation is necessary to keep the mind occupied and prevent brooding over physical condition. Therefore, where a State does not have the money at its disposal to purchase such a tract of land, it would seem to be a much better plan to employ a corps of trained nurses to travel the State, hunt out the pulmonary consumptive, and by advice and continuous assistance, teach the individual sick one, as well as the other members of the family, the rudiments of healthful living, and thus protect the well members of the family as well as to assist the sick.

There is another reason why the sanitarium would not be advisable for Florida, and that is if it once became known to the States north of us that the State of Florida was maintaining a tuberculosis sanitarium for the indigent, this class of invalids would flock down to this warmer climate, and this State would be at an enormous expense in looking after them; a charity which Florida taxpayers should not be expected to meet or to give. Therefore, for these reasons, the writer is opposed to a sanitarium plan in this State for the indigent tuberculous, greatly preferring the State district nursing system, and for the reason that it is believed more practical benefit and salutary results can be obtained.

CEREBRO-SPINAL MENINGITIS.

A few scattered cases of cerebro-spinal meningitis have been reported during the year.

Quarantine in cerebro-spinal meningitis is useless, and the State Board of Health of Florida was the first to abandon it. More recently, however, other States have eliminated quarantine for this disease, as a result of discoveries regarding its epidemiology.

MEASLES.

The only epidemic of measles of any extent occurred during the early part of the year, being reported from an area comprising Orange, Brevard and St. Lucie Counties.

Measles, although a communicable disease, is not classed by the State Board of Health as strictly quarantinable, except so far as isolating actual cases of sickness. Children that have experienced an attack of measles are not prohibited from attending school, even though measles yet exists in the family. While the State Board of Health does not take any very active measures against measles as a disease, because of its general mildness, it is within the power of the municipalities to pass such ordinances as its citizens may demand as necessary. The fact that in this climate diseases of this character are generally so mild, often times only resembling a shade of the disease, makes it perplexing both to make a diagnosis or detect cases. It will be appreciated, therefore, that to resort to quarantine as a distinctive preventive feature against this trouble would be an exceedingly difficult matter, because mild unreported cases will outnumber in many instances, the severe cases, and mild cases can communicate a severe type of the disease to individuals particularly susceptible. The practice of a great many physicians in saying that children ought to have measles while young, should be discouraged. No one should be made sick to carry out a "fad" idea of some one else. As has been stated, measles in this latitude tends to be mild, yet cases do occur where the disease brings forth complications sometimes causing death, or inflicts such after effects as deafness, impaired eyesight, or weakened throat.

SCARLET FEVER.

Cases of scarlet fever reported during the year have been few, but persistent. No epidemic has occurred, but the disease seems to be mildly widespread, having been reported from practically all parts of the State.

Quarantine of premises as a measure for the control of scarlet fever has been abandoned by the Board. The patient is isolated, and the public informed by card warnings on the premises.

HOOKWORM.

Since the resignations of Doctors Young and Diggett, and the consequent closing of the dispensaries in West Florida last March,

no definite plan has been pursued in the eradication of hookworm. Good results are being obtained, however, from the campaign of education which has always been carried on by the Board against this disease. During 1913 there have been received for examination by the laboratories of the State Board of Health three thousand, six hundred and ninety-seven hookworm specimens, one thousand, two hundred and seventy-six of which were found to be positive.

In view of the simple and inexpensive method of treatment of this disease, it may logically be expected that the great majority of those found to be infected have obtained relief.

An active crusade against this disease will be resumed in the near future.

HYDROPHOBIA.

The number of persons receiving Pasteur treatment through the State Board of Health during 1913 was one hundred and seven, as compared with one hundred and fourteen in 1912. Corroborative data may be found by referring to a prepared table on a separate page of this report.

The actual loss to the State through this disease, if loss of life is to be considered, is even greater than last year.

Much live stock has been destroyed throughout the State by infection from rabid dogs, and it seems that rabies is becoming prevalent in the wild animals, and indeed, in all manner of animals. The head of a fox, squirrel, chicken, and a few heads of horses, cows, and cats, were received during the year at the main laboratory of the Board and found positive for rabies, this in addition to the many dog heads, and examination of the brain of several persons dying from hydrophobia.

The only effective measure for the reduction of rabies in the State is by a rigid enforcement of a muzzling ordinance in the municipalities, and a wholesale destruction of homeless roving curs in the country. It is to be regretted that no State-wide muzzling law exists. Although such a bill has reached the Legislature, it still remains to be passed. Such a law, when strictly put in execution, would effect a saving to the State of many thousands of dollars a year by greatly reducing, and in time, practically eradicating, this plague from the State. An untiring educational campaign

has been carried on by the Board through Health Notes, and the press service, and it has been significant of an awakening on this subject, to have received several letters from Mayors of cities asking for advice in the control of this disease.

EXTRACTS FROM MINUTES OF REORGANIZATION MEETING OF THE
STATE BOARD OF HEALTH.

On Tuesday, June 10th, 1913, the State Board of Health of Florida convened in Jacksonville, at the offices of the State Board of Health, for the purpose of reorganization of the Board.

Present: Honorable Frank J. Fearnside, Honorable C. G. Memminger, Honorable S. R. Mallory Kennedy, M. D., and Joseph Y. Porter, M. D., State Health Officer.

At 10:15 a. m., Dr. Joseph Y. Porter, as Secretary of the Board, acted as temporary chairman, and called the meeting to order.

Upon motion made by Hon. C. G. Memminger, and seconded by Dr. S. R. Mallory Kennedy, Hon. Frank J. Fearnside, of Palatka, Fla., was elected President of the State Board of Health.

The election of State Health Officer being the next order of business, Dr. Kennedy nominated Dr. Joseph Y. Porter, present State Health Officer, of Key West, Fla., for reappointment for the ensuing term of four years. Mr. Memminger seconded the motion, which was unanimously carried.

The question of dividing the State into sanitary districts was then discussed, at length, by the full Board. Dr. Kennedy moved that the State Health Officer be empowered to employ, with the approval of the President of the Board, and upon recommendation of the resident member, a competent graduate physician, at Key West, Tampa, Jacksonville, and Pensacola, who shall act as assistants to the State Health Officer; * * * that these in no way shall conflict with the appointment of three field men, who shall be likewise under the immediate control of the State Health Officer and President. Mr. Memminger seconded the motion, and there being no objections, it was so ordered.

PUBLICITY AND PUBLICATIONS.

Health Notes, the monthly publication of the State Board of Health, continues to be popular not only in Florida, but seemingly so in other states, if one may judge from the commendation made, and from the circulation, which is steadily increasing. The circulation now is over five thousand copies per month. Until March, 1913, Health Notes was practically the only medium for public health publicity in the State. However, the Board at its annual meeting in February, 1913, approved of the plan of extensive publicity through the newspapers of the State. In order to invite reading, this matter has to be written in a popular and interesting manner, hence this feature was placed in the hands of Mr. George M. Chapin, an experienced newspaper and magazine writer, who obtains the necessary data and subject matter from the State Health Officer, and then places it before the public in an entertaining way. Mr. Chapin is due much credit for making this publicity bureau exceedingly popular and eagerly accepted by the press of the State; and in this manner sanitary subjects are put before many thousands of people. The newspapers are also due credit for their ready cooperation in public health publicity. Aside from Health Notes and the press service, many other articles along public health lines have been contributed to leading newspapers in the State from time to time. Special mention should be made of the writings of Dr. Kennedy in the Pensacola Journal, and articles on veterinary matters by Dr. Charles F. Dawson, Veterinarian of the Board, which have been published throughout the State.

Several publications have been issued by the State Board of Health during 1913, as follows:

Publication:

100. 24th Annual Report of the State Board of Health.
101. President's Letter of Transmittal (Separates from 24th Annual Report).
102. Typhoid Fever in Tampa.
103. Cattle Tick Eradication.
104. Hookworm Disease. (Second Edition.)
105. Malaria.
106. Mosquitoes.
107. Facts about Hog Cholera Serum and Its Distribution. Supplement to Publication 92, Rules and Regulations, Etc.

OFFICE ROUTINE.

The number of letters and other mail (with postage) sent out from the Executive Office during the past year is as follows:

	Letters and other 1st class mail.	2nd, 3rd, and 4th class mail.	Total No. Pieces sent Out.	Postage.
January	721	112	833	\$22.50
February	550	136	686	15.70
March	884	921	1805	29.39
April	636	1018	1654	37.72
May	626	797	1423	26.03
June	608	529	1137	23.70
July	487	928	1415	22.81
August	723	832	1555	27.47
September	644	1021	1665	31.34
October	763	853	1616	30.98
November	1250	1060	2310	48.68
December	808	924	1732	35.89
Totals	8700	9131	17831	\$352.21

Probably more information and advice is sought of the State Board of Health than any other department of the State. The above tabulation shows the volume of mail in the Executive Office only. Add to this the amount from the branch offices and laboratories, and that sent direct from the Veterinary Division, and it would be more than double.

In order that statistical data, and a history of the various branches of work in a summarized form might be always available, a monthly resume has been compiled, beginning with January, 1913. This also includes the itinerary and occupation of the personnel of the Executive Office during the month, which is made for the convenience of reference of the State Health Officer.

A record of the details of Assistants and nature of complaints handled by every member of the medical staff, from day to day, for the year 1913, is at hand in the office, but its great length prohibits publication.

Literature on the following subjects is on hand for distribution: Annual reports of the State Board of Health, few copies of 1904, 1905, 1906, 1907, 1909; a good supply of 1910, 1911, 1912 and 1913; Cattle Tick Eradication, Publication 103; back numbers of Health Notes; Hog Cholera, Publication 89; Hog Cholera Se-

rum, Facts Regarding, and Its Distribution, Publication 107; Hog Cholera, Supplement to Publication 89; Hookworm Disease, No. 104; Hookworms (leaflet) Publication 75; House Flies, Publication 77, and Poster; Lung Worms, Publication 97; Malaria, Publication 105; Mosquitoes, Publication 106; Ophthalmia Neonatorum, Publication 86; Medical Inspection of Schools, Publication 96; Rules and Regulations and Public Health Statutes, Publication 92, with supplement; Sewage Disposal for Rural Homes, Publication 99; Tuberculosis Posters; Typhoid Primer, Publication 88; Pellagra, (Federal Bulletin); Bulletins on Diphtheria, Scarlet Fever and Smallpox being printed.

The number of pieces of literature, exclusive of regular mailing list of Health Notes and Press Service Bulletins, distributed in 1913, amounted to 10,956
Adding to this 195 Press Service Bulletins for 44 weeks 8,580
Health Notes, 5,000 copies monthly 60,000
Annual Reports (mailing list) 200

Would bring the total number pieces distributed to 79,736 for 1913.

The clerical feature of this work has all been accomplished with the aid of but two Assistants, who have conducted the correspondence, tabulated data, proof-read manuscripts before sending to the printer, kept a correct mailing list of Health Notes and other literature intended for distribution, and in fact, have accurately managed the correspondence of the office. It therefore gives the State Health Officer great pleasure to testify to the worth, diligence and loyalty of both Mr. A. S. Swanson and Miss Begg, who have given him such valuable help.

LABORATORIES.

The laboratories of the State Board of Health, which may well be called Florida's Family Doctor, have continued to give assistance to the physicians of the State and thus to the people—who may be their patients—in affording an early diagnosis and “finding out” of the cause of illness or the extent of disease complication.

The work accomplished by these “Advance Agents” in scien-

tific medicine has steadily increased since the organization of this branch of public health management, from 996 in 1903, to 27,103 during the past year.

During 1913 not less than 25,000 people were advised regarding their physical condition, positively or negatively for disease, as a result of diagnoses made by the laboratories. Dr. Henry Hanson, the efficient Senior Bacteriologist, reports an increase of approximately six thousand specimens examined over last year.

The average cost per specimen examined at the bacteriological laboratories of the State Board of Health during 1913, was \$0.68, as compared with \$0.82 for 1912; a decrease in cost per specimen of \$0.14. The following table shows the average cost per specimen at each of the three laboratories, and a comparison with previous years:

Location	Number of Examinations	Total Cost	Average Cost per Specimen
Jacksonville -----	14,516	\$10,262.38	\$0.71
Tampa -----	8,735	5,695.36	.65
Pensacola -----	3,852	2,586.67	.67
Totals for 1913 -----	27,103	\$18,544.41	\$0.68
Totals for 1912 -----	21,080	17,399.44	.82
Totals for 1911 -----	20,233	16,458.65	.81
Totals, 1903 to 1910, inclusive -----	37,839	46,081.28	1.22

Criticism has been made by some who are not intelligently informed on the subject, that the bacteriological laboratories are chiefly of local benefit; that is to say, do good only in the places where located; that they are giving service practically only to the physicians of Jacksonville, Tampa and Pensacola, and that the State at large is receiving comparatively no aid through these institutions. The fact remains, however, that specimens examined by the laboratories of the Board are received through the mails from over three hundred towns throughout the entire State, as special data compiled by the Senior Bacteriologist and contained in his report to the State Health Officer will show. In such diseases, principally as tuberculosis or typhoid fever, it is not believed the mere fact that specimens must be sent by mail will interfere with diagnoses being sought of the laboratories, by physicians throughout Florida.

The report of the Senior Bacteriologist of the Board is full of entertaining data, and as the extent of what has been accomplished

is gone into quite in detail, those who may be interested are referred to this report for a more extended recital of transactions.

VETERINARY WORK.

During the past year, much of the time of the Veterinary Division has been devoted to educational measures directed towards tick eradication. At the meeting of the Board in February, an amount not to exceed \$5,000 was set aside for this purpose. A good record in this direction has been made during the past year, and much interest has been manifested by the stockmen of the State. In this work about \$2,500 has been expended to January 1st.

The lavish and in some instances wasteful, use of hog cholera serum by the farmers throughout the State has been greatly cut down during the past year, and at the same time, better results obtained from the serum sent out. This has been done by regulations governing its distribution. From the report of the Veterinarian it will be noted the cost of serum distributed amounted to \$8,120.00, as compared with \$12,253.43 in 1912.

Although quite a number of hog raisers now understand the method of correctly administering serum, it is still used indiscriminately by many. It is believed that a greater degree of efficiency could be obtained in the use of hog cholera serum by furnishing it at the cost price to the Board. Even though it were distributed at one-half or one-fourth cost, it would have the effect of bringing the applicants into closer study of its benefits, and economy of use.

GLANDERS.

At the close of the year glanders is again under good control, only one case having been found in December.

During the year sixty-three cases of glanders in horses and mules have been diagnosed by the Veterinary Division. This is the highest number of cases ever recorded, with the exception of 1909. The disease in Florida is undoubtedly imported. Glanders is communicable to man, and is fatal. One case occurred in a human being during the year. A table showing distribution of this

disease, and remarks, will be found in the report of the Veterinarian of the State Board of Health to the State Health Officer.

PUBLIC HEALTH LEGISLATION.

A saving of three thousand dollars per annum to the State would have been effected by the passage of a bill introduced in the last Legislature, providing free transportation for the employees of the Board when on public health details. Aside from the economical feature which could have thus been brought about, the efficiency of the field force would have been greatly increased, for then investigations and public health work could have been pushed to the remote parts of the State, without having to consider the cost of transportation. The people of the State would have monetarily profited by the granting of free travel to the employees of the State Board of Health, the railroads and other public transportation agencies would also have been gainers by this source, and the citizens generally would have been benefited, for the Board would have been enabled to give greater assistance to the agricultural interests, particularly in connection with the administration of hog cholera serum and the furtherance of cattle tick eradication. When the public profits by more extended public health work, and the agricultural and stock raising industries derive benefit, the transportation companies likewise profit—hence, they signified a willingness to grant passes to the employees of the State Board of Health, if permitted to do so by the Legislature, and did not consider the concession as a donation, for they will enjoy a pecuniary advantage of the reciprocity. The State health officials and employees of Alabama and other states are permitted to accept free transportation, and the State Board of Health of Florida has long been desirous of obtaining the same privilege. After receiving the consent and having noted the willingness of the Presidents of the leading railroads operating in Florida to give free transportation to the employees of the State Board of Health, and having viewed the matter from a logical standpoint that, if sheriffs, who are allowed mileage and fees for travel, and clergymen and those connected with eleemosynary institutions were by statute permitted to accept free transportation, it could not be understood why public health offi-

cials who are engaged in a vital campaign against disease and in the interest of humanity, should be denied a similar legislative privilege, the following bill was carefully drawn and introduced, but was, however, defeated in the Legislature of 1913—it has been understood, at the instance of the Railroad Commission:

A Bill to be entitled An Act Authorizing Common Carriers, including Railroad Companies, to grant free passage or tickets to the State Health Officer, Assistant State Health Officer and Employees of the State Board of Health.

Be It Enacted by the Legislature of the State of Florida:

SECTION 1. That it shall be lawful for common carriers, including Railroad Companies, operating in this State to grant free passage or free tickets to the State Health Officer, Assistant State Health Officers, and Agents or Employees of the State Board of Health, for their use when traveling in connection with the duties of their respective positions.

SECTION 2. That all laws in conflict or inconsistent herewith are hereby repealed, and this Act shall take effect immediately upon its becoming a law.

CATTLE TICK ERADICATION.

Chapter 5933 of the Laws of Florida, 1909, provides for the prevention, suppression and control of dangerous, contagious and infectious diseases in domestic animals and live stock, and imposes certain duties and confers certain powers on the State Board of Health for such purposes, among which is the employment of the most practical means for the prevention and suppression of Southern cattle fever, or Texas fever. Pursuant to this Act, the State Board of Health at its annual meeting in February, 1913, adopted certain preliminary measures for the eradication of the Southern cattle tick, *Margaropus annulatus*, which causes Texas fever in cattle. The means then proposed will take many years and a large amount of money to accomplish. It was decided, therefore, that more specific legislation was advisable to carry on this work, and consequently, the following bill was recommended and passed:

LAWS OF FLORIDA, 1913.

CHAPTER 6434—(No. 14).

An Act to Provide the State Board of Health With Funds for the Eradication of the Southern Cattle Tick; to Authorize the County Commissioners of the Various Counties to Appropriate Funds to Be Used in Such Work; and to Permit the Appointment of Federal Officials as Agents Without Pay.

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Be It Enacted by the Legislature of the State of Florida:

SECTION 1. The State Board of Health is hereby authorized, empowered and directed to expend, under the regulations provided by existing law, such amounts as the Board may deem necessary and expedient out of the funds derived from the operation of Chapter 4693, Acts of 1899, in the control and eradication of the Southern Cattle Tick, through the employment of State and County Agents, payment for labor and materials, and for any other expenditures that may be found useful and necessary in the prosecution of such work; and the Board of Health is hereby authorized and empowered, after investigation of suitable locations, and upon recommendation of the Executive Committee of the Florida State Live Stock Association, to construct cattle dipping vats in communities where such aid is deemed useful for demonstration and proper conduct of tick eradication work.

SECTION 2. The County Commissioners of any county of the State of Florida are hereby authorized and empowered to appropriate such amounts of money as they may deem adequate and necessary, for the purpose of co-operating with the officials of the State Board of Health in eradicating the Southern Cattle Tick, and in preventing contagious or infectious diseases of animals; or whenever funds for this purpose are raised by private subscriptions of individuals.

SECTION 3. The State Health Officer is hereby authorized and empowered to appoint officials of the United States Department of Agriculture detailed for co-operative work in the eradication of the Southern Cattle Tick, or the control or suppression of contagious or infectious diseases of animals in Florida, as agents of the State Board of Health; Provided, that they act without pay from the State of Florida.

SECTION 4. This act shall become effective upon its passage and approval by the Governor, or upon its becoming a law without such approval.

Approved June 7, 1913.

POLLUTION OF UNDERGROUND WATERS.

It is important that the State Board of Health control the water supplies of the State, as the fouling of underground waters by the introduction of raw and untreated sewage into sink holes or sink wells is undoubtedly dangerous, and may well be considered a menace to health. The following bill, drawn by Hon. C. G. Memminger, of Lakeland, Fla., and Mr. Chester R. McFarland, Secretary of the Tampa Water Works, Tampa, Fla., received the support of the State Board of Health, and was passed by the Legislature; this Act makes possible the preservation of purity of underground waters.

While it is a commendable measure, and one which had the warm support of the Executive Office, it is not thought that the framers of the bill, nor those from whom the idea originated, de-

sired to place under the legal ban, any drainage of surface water which might accumulate from storms or excessive rainfall, for no possible harm or pollution could come from draining off this water which would not occur from natural seepage:

CHAPTER 6443. (No. 23.)

An Act To Preserve the Purity of the Underground Waters of the State of Florida for the Protection of the Public Health.

Be it Enacted by the Legislature of the State of Florida:

SECTION 1. That the term "Underground Waters of the State," when used in this Act, shall include all underground streams and springs and underground waters within the borders of the State of Florida, whether flowing in underground channels or passing through the pores of the rocks.

SECTION 2. No municipal corporation, private corporation, person or persons, within the State, shall, after the passing of this Act, use any cavity, sink, driven or drilled well now in existence, or sink any new well within the corporate limits, or within five miles of the corporate limits of any incorporated city or town, or within any unincorporated city, town or village or within five miles thereof, for the purpose of draining any surface water or discharging any sewerage* into the underground waters of the State, without first obtaining a written permit from the State Board of Health.

SECTION 3. Every such permit for the discharge of sewerage, or surface water, shall be revocable or subject to modification or change by the State Board of Health, on due notice, after an investigation and hearing, and an opportunity for all interests and persons interested therein to be heard thereon; said notice or notices being served on the persons owning, maintaining or using the well, cavity or sink, and by publication for two weeks in a newspaper published in the county in which said well, cavity or sink is located. The length of time, after the receipt of the notice within which it shall be discontinued may be stated in the permit. All such permits, before becoming operative, shall be filed in the office of the Clerk of the Circuit Court for the County in which such permit has been granted.

SECTION 4. For the purpose of this Act, sewerage shall be defined as any substance that contains any of the waste products or excrementitious or other discharges from the bodies of human being or animals.

SECTION 5. Every individual, municipal corporation, private corporation or company, shall discontinue the discharge within the corporate limits or within five miles of the corporate limits of any incorporated city or town, or within any unincorporated city, town or village or within five miles thereof, of sewerage or surface drainage into any of the underground waters of the State within ten days after having been so ordered by the State Board of Health.

SECTION 6. Any municipal corporation, private corporation, person or persons that shall discharge sewerage or surface drainage, or permit the same to flow into the underground waters of the State, contrary to the

*This Act is printed exactly as certified by the Secretary of State, and the State Board of Health is not responsible for the misuse of the words "sewage" and "sewerage."

provisions of this Act, shall be deemed guilty of a misdemeanor, and shall upon conviction be punished by a fine of twenty-five (\$25.00) dollars for each offence, and the doing of the prohibited Act for each day shall constitute a separate offence, or by imprisonment not exceeding one month, or both, at the discretion of the Court.

SECTION 7. All laws or parts of laws in conflict with the provisions hereof, are hereby repealed.

Approved June 7, 1913.

FINANCES.

The question of cost enters largely into the problem of maintenance of health government equally as it does in commercial business—but, as in the mercantile world, the volume of trade helps to build up profits and thus obtain satisfactory results, so in the conduct of health campaigns, and sanitary reforms, it is the results that have been accomplished and the people benefited both individually and collectively, which should be the consideration, and not merely the sum total of money expended.

The table of expenditures on another page gives in detailed statement the amount which the Board has expended during the year in its endeavor to preserve the health of the State. The total of expenditures during the year has been \$95,241.81, itemized as shown in table No. 1.

The amount appears large on first glance, but when each item of expenditure is taken up and carefully analyzed, it will be seen that, with the varied demands which the Board had to meet in fulfilling the obligations placed upon it by law, an economical administration of the State's funds has been effected. The clerical force employed at the central administration building in Jacksonville is not nearly large enough to fulfill the demands which the correspondence, auditing of accounts, central laboratory, the veterinary, and lately the statistical department, imposes; but the State Health Officer has hesitated to increase this force because of the apparently large sum already required for salaries and office equipment. It may be interesting, and as information also, to recite just what is expected of the Board in the matter of health administration in the State, and then compare the work performed with the cost of administration. The statutes of the State demand that the Board shall care for smallpox occurring among the indigent, and also for a free

distribution of vaccine virus, as a protective measure against the disease, and as an effective aid in suppressing and stamping it out in a community wherever occurring; that crippled children, whose parents are without the necessary financial or monetary means of correcting deformities shall have the same done at the expense of the State; that Pasteur treatment for the prevention of hydrophobia in those who may have been bitten by animals, known to be, or suspected of being, rabid, and who are financially unable to defray the expense, shall be supplied free with this preventive; the supplying of diphtheria anti-toxin as a preventive and curative agent of diphtheria among the indigent; in pushing the campaign against hookworm for the relief of the indigent weaklings of the State from this cause; that the domestic animals shall be looked after in their health, and that glanders occurring in horses and mules shall be investigated, and when the animals are killed shall be paid for by the State; that the farmers of the State shall be supplied without cost with hog cholera serum, which in itself is an expenditure of from fifteen to twenty thousand dollars a year. It can be understood, therefore, without further detailed explanation, where the funds collected for the maintenance of the Health Department of the State go, and how expended.

There are two items of expense that to the mind of the State Health Officer could and should be eliminated as soon as the Legislature can be influenced to enact the necessary amendments to certain laws now existing: The destruction of glandered animals should not be paid for by the State; neither should hog cholera serum be supplied free. It was pointed out in last year's report and due emphasis given to the statement because of the approaching session of the Legislature (when it was hoped that the evil as it appeared to the State Health Officer might be corrected), that the tax payers of the State should no more be called upon to pay for animals killed on account of glanders, as an equitable proposition, than that the State should be asked to reimburse citrus fruit growers for the loss of their groves by insect destruction or by freezing. On the same basis of reasoning that glandered animals when destroyed should be paid for by the State, should not hogs and swine herds killed by hog cholera also be a charge upon the State's bounty? It is believed that, if the remuneration propo-

sition is eliminated, the stock owners would be more careful to see, when purchasing animals brought into the State for sale, that they were free from this disease. Under the present system of paying for destruction of glandered animals there is a strong inducement for unscrupulous horse dealers to buy diseased stock elsewhere and introduce into the State animals but slightly affected, which, when purchased at low prices, can be sold at an attractive figure and with profit. Therefore, in paying for the destruction of these animals, the State is unintentionally offering an opportunity to commit fraud upon the tax payers.

Florida is the only State in the Union which furnishes hog cholera serum free to agricultural interests; in other States this serum is furnished at cost price of production, which would seem to be a better system and one where economy can be practiced and equal efficiency obtained.

The present enactment gives no discretionary powers to the Executive Officer of the Board in supplying this commodity on demand, for the law reads that the serum shall be furnished free to the farmers of the State on application. Often times an application comes without any information as to number of hogs to be treated, weight, or other needful data. The Executive Officer has tried to safeguard this gift of the State as far as possible by requiring blanks to be filled out so that the statistics might be tabulated for record. This has incurred criticism in a great many instances, and some charge that this delay has caused the loss of a good many swine before the serum could be had. It is an old saying that whatever is cheap and easily obtained for nothing, is not valued, and certainly this has been true in regard to the distribution of the serum, for on more than one occasion the product has been requested when there was no certainty of its being used; and when returned after several weeks, the bottles were unopened, and worthless for future distribution, because of length of time which had elapsed since it left the office. This serum like many others, has a certain definite period of activity, and time plays an important factor in its life. An instance was cited last year, in which a bottle of hog cholera serum valued at \$20.00 was found on the shelf of a barber shop which, upon inquiry, was found to have been traded in for shaves.

The expenditures of the state funds for the destruction of glandered animals and the free distribution of hog cholera serum certainly deserves consideration and careful thought on the part of the Board, whether a recommendation for an amendment to the present laws, should not be insisted upon.

* * * * *

Before closing this narrative of "Current Events" of the year in health circles of the State, attention is invited to an exceedingly interesting report of Dr. E. W. Diggett, who was commissioned by the State Health Officer to investigate the health conditions of the Seminole Indians living in the "Big Cypress" section of the Everglades. Some years ago when Dr. Diggett was in the State Health Service, as an Assistant to the State Health Officer, he conducted a campaign against hookworm in the counties of Lee and DeSoto, and at that time became acquainted with Dr. Godden, the medical Missionary to the Indian settlement outlying Fort Myers. Both being Englishmen by birth, they were very naturally attracted to each other, and Dr. Godden interested Dr. Diggett in the Indian work, so much so, that permission was given to Dr. Diggett to accompany Dr. Godden to the Mission House at Immokalee, some seventy miles from Fort Myers. The object of this visit was to learn of the existence of hookworm among the Indians and to gather other instructive facts connected with this race. From this visit, keen desire was created on the part of the Executive office to learn more of the social as well as physical traits of this remnant of a once powerful tribe, and accordingly, as a petition from the Indians to the Board was received for another visit from Dr. Diggett, and Dr. Diggett expressed a wish to further pursue the study of the Seminoles, another detail was arranged for him, and the months of October, November and December, Dr. Diggett spent with the Indians of the "Big Cypress." His history of events as occurring during this detail will afford much pleasure, it is thought, to the reader.

If the Board considers this subject of sufficient importance to pursue the study further, it is suggested that Dr. Diggett be again detailed, and that he visit the Okeechobee tribe. The Seminoles seem to have confidence in Dr. Diggett; in fact they petitioned the Board as has already been mentioned, for a visit from him.

Many other topics could be discussed with interest, and it

may be said, with profit, at this time; but this report, with the attached papers from the laboratories, assistants to the State Health Officer, Veterinary and other Divisions, is already a lengthy one, and besides, the Health Notes and the Press Service of the Board has weekly and monthly contributed to sanitary information and useful advice in the manner and methods of healthful living; so that it is not necessary, it is thought, to repeat what has been discussed at other times.

AUDITING AND ACCOUNTS

It is difficult to accurately state in detail the amount and varied character of work in this division of the State Health Department, because of the many items which go to make up a report of this nature.

Since I was placed in charge of this branch in 1905, after the death of Mr. Durrance, chief clerk in the executive office at that time, the work has steadily increased. The number of vouchers for claims submitted against the Board, which have to be made as the Comptroller of the State directs, has grown from 746 in 1906 to 1247 in 1913. Each claim coming in against the Board has to be carefully scrutinized, with more or less correspondence to be done, then vouchered and returned to payees for their signatures who many times put it aside, forgetting to sign and return them until they are written to, which means delay and misunderstanding. All this and more, before the accounts can be properly submitted for approval by the officials of the Board charged under law for this purpose. Add to this the book-keeping, where is entered in its own appropriate column the various items, so that at a glance it can be seen where and for what, the Board's money is paid. For each account audited, there are seven records on file, not including the original voucher, which goes to the Comptroller.

Each Legislature for several years has added to the supervisory work of the Board, with additional increase of money outlays. For instance: the free distribution of Hog Cholera Serum to the farmers of the State; payment for glandered animals; the educational effort of the Board in Cattle Tick Eradication; Pasteur Treatment to the indigent; care and treatment of crippled children; construction of central laboratory and office building, with filling in of low grounds around the building; grassing same; two branch laboratories and additional field Assistants to the State Health Officer, has materially increased the amount of money expended by the Board this year over former years, as well as the amount of clerical work.

The money accounts of the Board overlap from year to year, making the statement of the Comptroller, and that published by the State Board of Health disagree in totals. This is explained by the Board balancing its accounts of the year on the 31st of December and charging the amount expended during the year, to that year alone, while in the Comptroller's statements bills paid in January, although chargeable to the year previous, are included for the year in which they were honored.

Respectfully,

L. A. HERNDONE

Auditor.

No. 1

THE EXPENDITURES IN DETAIL.

	Item	Total
Per diem and mileage, Members of the board, February and June meetings -----	\$ 280.20	\$ 280.20
Salaries and Travel Expenses:		
Salary State Health Officer -----	3,000.00	
Travel expenses, State Health Officer -----	1,349.97	4,349.97
Salaries of seven regular Assistants to State Health Officer, and three Assistants resigned -----	11,011.91	
Travel expenses, Assistants to State Health Officer -----	2,603.45	13,615.36
Salaries, County Agents -----	1,782.50	1,782.50
Salaries Veterinary Division -----	4,012.42	
Travel expenses, Veterinary Division, including per diem Tick Eradication Agents -----	2,115.21	6,127.63
Salaries of Sanitary Patrolmen, Jacksonville, Tampa Pensacola and Key West -----	4,245.49	4,245.49
Maintenance of Executive Office, Jacksonville:		
Clerical Assistance: Salaries of three clerks and office boy, and special clerical service -----	3,889.93	
Vital Statistics: Salary of Statistician and expenditure for reports -----	613.69	
General office expenses, including telephone charges, postage, expressage and office fixtures -----	1,910.58	
Printing, publications and incidental expense, stationery, records, etc. -----	3,882.62	
Telegraph tolls -----	419.00	
Insurance and miscellaneous items -----	156.69	10,872.51
Library: equipment and maintenance -----		845.75
Administrative Building: equipment and maintenance -----		2,976.61

Grounds, Administrative Building: filling, grading, fencing etc. -----		2,892.00
County Isolation Hospitals: Equipment and Maintenance:		
Dade County -----	189.50	
Duval County -----	3,874.08	
Escambia County -----	935.09	
Hillsborough County -----	1,057.30	6,055.97
Smallpox expense, unclassified -----		2,643.71
Vaccine (smallpox) -----		1,371.50
Diththeria and tetanus antitoxins -----		1,416.42
Pasteur treatment for the indigent -----		1,434.15
Expense incident to uncinariasis, unclassified -----		703.13
Reimbursement for glandered animals (including \$4.45 veterinarian's fee) -----		4,654.45
Hog cholera serum -----		7,809.13
Crippled children: hospital and incidental expense -----		2,620.92
Bacteriological Laboratories:		
Jacksonville: Salaries, Senior Bacteriologist, two assistants, stenographer and two orderlies -----	6,860.76	
Equipment and maintenance -----	3,401.62	10,262.38
Tampa: Salaries two bacteriologists, stenographer and janitor -----	4,700.38	
Equipment and maintenance -----	994.98	5,695.36
Pensacola: Salaries one bacteriologist and office boy -----	2,179.92	
Equipment and maintenance -----	406.75	2,586.67
Total expenditures, 1913 -----		\$95,241.81

No. 2.

RECEIPTS.

	Regular Requisition	Special Requisition	Returned to Comptroller	Total
January -----	\$ 2,906.52	\$2,771.23		\$ 5,677.75
February -----	3,235.45	3,443.34		8,937.89
		2,259.10		
March -----	2,943.46	834.00		
		3,342.76		
		1,172.47		8,292.69
April -----	2,961.30	3,849.77		6,811.07
May -----	2,985.54	3,153.49		6,139.03
June -----	3,418.79	750.00		
		3,249.41		
		2,487.91		9,906.11
July -----	4,125.43	3,954.34		8,079.77
August -----	3,941.64	2,839.21	\$ 5.00	
		1,947.45		8,723.30

TWENTY-FIFTH ANNUAL REPORT

September -----	3,870.42	839.30	95.75	
		3,585.26		8,199.23
October -----	4,173.07	3,889.06	98.05	
		1,380.25		9,344.33
November -----	4,119.50	868.05	15.45	
		3,174.42		8,146.52
December -----	4,078.90	2,937.72	32.50	6,984.12
Totals -----	\$42,760.02	\$52,728.54	\$246.75	\$95,241.81
Total receipts, 1913 -----				\$95,488.56
Returned to Comptroller, 1913 -----				246.75
Total amount expended, 1913 -----				\$95,241.81

REPORT OF VITAL STATISTICIAN

I herewith submit a statement of the present status of Vital Statistics and a brief review of what was done by the State Board of Health, during 1913, in this State towards the eventual accurate collection of records of births and deaths.

Before stating the work and situation in Florida, it will be well to understand just what vital statistics are, and to glance at its present status abroad and look into what the other States of this Union are doing.

Vital Statistics has been stated to be the science of numbers applied to the life-history of communities and nations, comprising the data of births and deaths, and other important events in the life-history of individuals, as marriage, and sickness. The data of sickness, is, however, usually dealt with separately, under the title "Morbidity Statistics," and the more important vital data usually gathered and compared are births and deaths, and these are the statistics referred to herein.

In European countries the records of births and deaths have been kept for many years, more perfectly in some than in others, but at the present time, one is fairly safe in saying that in the Great Powers, excepting possibly Russia, and many of their possessions and colonies, practically complete and accurate reports are obtainable as to these facts. And most of the smaller countries of Europe have even more perfect records than the larger, notably Belgium, Holland, Denmark, Sweden, Norway and Switzerland. When this statement is made, it means more than appears on its face—it means that probably ninety per cent of all persons now living in these countries have had their births recorded, and that of present births and deaths, probably at least ninety-five per cent are recorded.

It is unnecessary to say anything of other foreign nations, because, for purposes of comparison with the United States, the European races, whose blood enters so largely into that of this land, are the only ones fairly comparable.

In the United States, the collection of these records, with any such degree of accuracy, as in Europe, is a thing of only a few years. To say nothing of the early history of the work, it will suffice to state that in 1900 the U. S. Census Bureau tabulated the data of deaths from the six New England States, New York, New Jersey, Michigan, Indiana, the District of Columbia, and a large number of cities of 8,000 or more population in other States; and these states and cities, comprising a total population of nearly twenty-nine million, about forty percent of that of the nation, were termed the Registration Area for deaths.

Since then, this area has enlarged until at the beginning of 1914 it consists of twenty-three states, the District of Columbia, all cities in North Carolina of one thousand population and over, and about 40 cities in other States; being nearly sixty-three million and about sixty-five per cent of the people of the United States.

To enter this registration area, the Census Office demands that at least ninety per cent of all deaths be recorded, as it is considered that any statistics of less degree of accuracy are misleading and cannot be used in comparison either with each other or with results in other countries.

It should be noted here, that there is no registration area for births, and that up to this present the Census Office has not published official statements of the collection of such reports save in a few instances as taken from reports of certain few states and cities.

That portion of the registration area south of the Mason and Dixon line and the Ohio River and east of the Mississippi River, is of special interest to those in Florida and adjoining states, as it contains the large proportion of colored element, and has more or less similar health problems.

Of the states in this section, only Kentucky, Maryland, Virginia, the District of Columbia, and the cities of North Carolina, are within the registration area, and of the cities in other States the following 15 have been admitted.

ALABAMA—Birmingham, Mobile, Montgomery.
 FLORIDA—Jacksonville, Key West, Pensacola.
 GEORGIA—Atlanta, Augusta, Savannah.
 LOUISIANA—New Orleans.
 SOUTH CAROLINA—Charleston.
 TENNESSEE—Knoxville, Memphis, Nashville.
 WEST VIRGINIA—Wheeling.

Of the States of the above section not within the area, Tennessee and Mississippi have lately adopted the model law for registration of births and deaths recommended by the Census Office and are so vigorously enforcing it that they may soon be admitted. North Carolina has passed the law for statewide registration, but an amendment eliminated the requirement of burial permits in rural districts; when this is made necessary, the State will in all probability be admitted soon thereafter. Louisiana, which lies partially east of the Mississippi, has the principals of the model law in operation, and only needs a provision for payment of reports to enable the State to soon collect death statistics sufficiently accurate to enter. West Virginia is still without a satisfactory law, but she is so far north as to be unnecessary in comparison of results.

Of the remaining states, Alabama is attempting under an inadequate law to collect statistics, but results are inaccurate. She is considering the adoption of ordinances requiring the burial permit in municipalities of 500 and over, which, if effectively enforced would allow this part of her population to soon be within the registration area.

Georgia and South Carolina have no State laws for collecting vital statistics, but in Georgia at the last legislature the model law was introduced and passed second reading in the House, only failing on account of short session. It is believed an acceptable law will be passed in 1914. In South Carolina a beginning was made by the 1913 legislature considering a measure, and it is believed the model law will be introduced at the next session.

These two states, with Alabama and West Virginia, have not as yet adopted the standard certificates uniformly used in the registration area, and prescribed by the model law for registration of deaths and births; all of the other states in this Southern section including Florida, have adopted and are using these standard certificates, which are necessary for uniform and comparable statistics, especially of causes of death and occupational mortality.

In all these neighbor states there is an awakened interest in the movement and at the next meetings of their legislatures there may be steps taken which will put them within reasonable possibility of collecting the required ninety per cent of death reports.

So much for the status of collecting reports of deaths. As stated before, there is no registration area for births, only a few

states having returns considered as possibly ninety per cent accurate, only one of these, Kentucky, being in the South. Of the cities collecting such reports there is probably a larger proportion of that degree of accuracy, but the only one in the South, Washington, D. C., claims but ninety-five per cent.

The experience of all the states which have been admitted to the area, as well as the failures in the others, shows that the principles of the model law are the needed points for requisite accuracy of returns. These are, local registrars directly responsible to a state registrar, the prompt filing of certificates of birth and death (with the absolutely necessary check of the compulsory burial permit for the latter) with the local registrar—and the prompt return of the original certificates directly from the local registrar to the State registrar. These words are those of Dr. Cressy L. Wilbur, Chief Statistician of the Census Bureau, the acknowledged authority of the United States on this subject.

THE WORK AND SITUATION IN FLORIDA.

The attempts of the State Board of Health to collect reports of births and deaths in this State, both before and after the passage of the Act of 1899, establishing the Bureau of Vital Statistics with the State Health Officer, as *ex officio* Registrar for the State, and the failures to obtain any results sufficiently accurate to bear careful scrutiny or to be used in comparison, have been set forth at large in annual reports of the Board and are unnecessary to be reiterated here.

Early in 1913 the project of the collection of reports through the co-operation of municipal authorities in cities of 2,000 population and over was considered and investigated. The Bureau of the Census was consulted and asked whether the results of such collection would be used and published in its compilations of deaths and annual mortality statistics. The reply was to the effect that if ninety per cent or over of deaths occurring among the population of these cities was reported according to the requirements of that office, the results would be received and published and these cities would be placed within the registration area *as a class*.

Accordingly the authorities of the qualified cities were written and asked if they would take up the work under existing, or by the passage of new or amendment of imperfect, municipal ordinances for the prompt and accurate reporting of all deaths, and also

births, within their limits, and the nomination or appointment of registrars, to be approved by the Board, to transmit such report to its office.

Within the State there are twenty-nine cities which had a mid-year population, the basis used in vital statistics calculations, according to the estimates of the Bureau of the Census, of 2,000 or more as of July 1, 1913.

They are as follows, arranged in descending order of size of these estimates, with figures of the U. S. Census of April 15, 1910, for comparison:

	April 15, 1910	Estimated July 1, 1913
Jacksonville -----	57,699	67,209
Tampa -----	37,782	46,792
Pensacola -----	22,982	24,682
Key West -----	19,945	20,863
West Tampa -----	8,258	10,174
Gainesville -----	6,183	7,011
Miami -----	5,471	6,701
St. Augustine -----	5,494	5,889
Tallahassee -----	5,018	5,679
Lake City -----	5,032	5,363
St. Petersburg -----	4,127	4,955
Ocala -----	4,370	4,691
Lakeland -----	3,719	4,544
Orlando -----	3,894	4,353
Sanford -----	3,570	4,257
Live Oak -----	3,450	4,031
Quincy -----	3,204	3,968
Palatka -----	3,779	3,933
Fernandina -----	3,482	3,559
Daytona -----	3,082	3,534
DeLand -----	2,812	3,255
Apalachicola -----	3,065	3,062
Plant City -----	2,481	3,052
Fort Myers -----	2,463	2,957
Bartow -----	2,662	2,881
Tarpon Springs -----	2,212	2,754
DeFuniak Springs -----	2,017	2,543
Kissimmee -----	2,157	2,489
Marianna -----	1,915	2,243

These estimated populations of 1913 may be disappointing to some, but it should be remembered that they place all communities within the United States upon an equal footing for comparison, as

the same methods are used in all estimating, that this is the necessary factor, and that absolute size is of no moment.

It should be noted here that when the matter was taken up with the Census Office, the matter of size of cities was based upon the figures of the 1910 census and that all of the above list were above the stated population at that time, excepting the last named, which afterwards, by extending its limits, brought itself within the qualified list. And it should also be noted that there are twenty-nine cities listed, while publications, letters and discussions of this subject, have always referred to the twenty-eight cities. This resulted from the fact that the Registrar of Tampa, by agreement with this Board and the cities of Tampa and West Tampa, acted and is still acting for both, and therefore these two cities have been heretofore classed as one.

The replies from these cities to the requests for co-operation were most encouraging and up to this time all, with but few exceptions, have passed ordinances and appointed registrars. The few exceptions have, it is confidently believed, arranged to collect reports from and after January 1, 1914, voluntarily, pending the passage of necessary ordinances or appointment of registrars, which steps are to be taken in the near future.

The registrars in these cities send to this office the original records of births and deaths filed with them keeping copies for their local reference, and are paid 25 cents for each, provided their total returns are within ninety per cent of accuracy. In a few cities, notably Jacksonville, where provision for filing records is made, transcripts are sent here for compilation, in lieu of the originals, for which the sum of six cents each is paid. It would seem that, except where proper precautions against fire and loss are taken, the slight saving in cost between the transcripts and originals hardly justifies the possibility of damage to individuals in case of loss or destruction of the original records.

A number of these cities have Boards of Health, some have City Health Officers, some City Physicians, a few have all, more, two of the three. Since the work in behalf of vital statistics has been vigorously pushed, a number of cities without health organizations or authorities have organized them, and more are now doing so. And this is true both of cities in the qualified list and also of smaller communities. Several have written for advice as to organ-

ization and ordinances and these have been helped as far as possible.

The ordinances for reporting births and deaths, both those in force and those passed lately, are quite varied. A few, especially in larger cities, provide for burial permits, but this necessary check upon the reporting of deaths is generally wanting. Some provide for one of the most essential elements—promptness—by requiring all reports to be filed within the few days provided by the model law, but some only require them to be reported monthly.

The above cited variances strongly suggest the need of uniformity, both in an ordinance to conform as far as may be to the model law, with modifications for local conditions if necessary, and primarily in the institution of some sort of health department in each community. These health authorities should use the local returns to keep posted as to existence of disease, especially of contagious nature, to investigate all deaths without medical attendance, and in those with suspicious circumstances to refer cases to coroner, also to refer any case seeming to need police scrutiny to the proper official. The conservation of infant life and health would also be under their care, and births without physicians in attendance could be looked after to prevent blindness and tetanus. The city health officer or city physician would also be able to assist physicians and the registrar in having the cause of death in death certificates properly assigned, and would be otherwise of great assistance to nonmedical registrars in many matters involving professional advice.

During the campaign to have the qualified cities pass ordinances and appoint registrars publicity was given the work through press bulletins, both those regularly going to all the papers in the State, and special to papers in all the cities of the list. With the latter were letters to the editors urging them to prominently publish all matter relating to vital statistics and to editorially urge the work. Extra copies of these bulletins were also mailed in large numbers to all who might help in the backward cities.

In the August number of Health Notes the proposed system was set out fully and since then each number has had articles relating to it, some of general interest and some especially on points of practice for registrars, physicians, midwives and others reporting births and deaths. Besides the regular distribution of these

numbers of Health Notes, marked copies have been mailed to all who were interested.

Matter was also furnished the local papers for use in notices favorable to the plan and was published by them.

And here it should be stated that almost without exception the press of the State has shown its interest and appreciation of the work by promptly printing material furnished them and favorable editorial comment. It is believed much of the interest now generally shown has been due to the articles published by the papers of the State and to their editors thanks should be extended.

The records which have been received through the registrars of these qualified cities up to January 1st, while not quite of the required accuracy, show much improvement both in percentage and in the other requirements, and it can hardly be doubted that they will meet the requirements of the Bureau of the Census during 1914.

All of the records so far received, with those from other parts of the State sent in direct, and the great accumulation gathered since the fire of 1901, while not of value statistically, will be of utmost importance to individuals as evidence of births and deaths when they are properly safeguarded, filed and indexed.

MORBIDITY STATISTICS.

Before closing, a few words should be said as to morbidity statistics. By statute certain diseases are required to be reported to the President of the Board, and by the Rules and Regulations a number of others are made reportable to the State Health Officer. To assist physicians in their duty, post cards have been widely distributed during the year, which need only the insertion of name, location, and a few personal items of patient, the checking of the disease, the physician's signature, and mailing. The reports coming in, do not indicate that these diseases, except possibly those most dangerous, are reported fully, and it would seem that future legislation, both state and local, should lay more stress upon the necessity of such reports. Ordinances in the cities where the reporting of births and deaths is enforced, might well embody the essentials of the draft of the model law for notification of occurrence and prevalence of certain diseases, which has lately been adopted at a

conference of State and Territorial health authorities with the U. S. Public Health Service, and the future State legislation should be in full accord with its provisions.

Respectfully,
W. VOORHEES,
Vital Statistician.

LIBRARY

As requested, I herewith submit the following report of the work done in the Library during the year ending December 31, 1913.

Previous to 1913 there was not much accomplished toward a library. Owing to insufficient space in the old quarters of the State Board of Health, all books, periodicals and pamphlets, after being scanned on their arrival were kept stored away in a few bookcases, cupboards, or anywhere they could be put to safely preserve them.

When the Offices were moved to the State Board of Health Building in Springfield Park, this pile of books, pamphlets, etc., that had been accumulating since the fire of 1901, was temporarily deposited in a large room fourteen by twenty-nine feet, occupying the north end of the building on the second floor.

In February, 1913, I assumed the duties of librarian, together with my other work as filing clerk.

While there is still a great deal to be done, this room is now one of the most attractive in the building. The floor has been covered with solid color, dull brown linoleum, and the woodwork and furniture is mission in Early English finish.

There are in the library now, 1,408 books, most of which are bound volumes of Medical Journals, Annual Reports of State and City Boards of Health, and a number of medical books given by Drs. Murray, Sweeting and Porter of Key West. There are also 2,000 pamphlets. All of these books and pamphlets have been listed, "Property of the State Board of Health of Florida;" classified by subject according to the Dewey Decimal System; given author numbers by Cutter System; marked and filed in order. Pockets have been pasted in all of the books and card catalog made consisting of three cards, author, subject, and title, for each book. Of the pamphlets 248 have cataloged, but they are filed in vertical steel cases and it only takes a few moments to run over them and find anything needed. Before the end of 1914 I hope to have the catalog completed. A book or charging card has been made for each book and pamphlet, and we have a very simple and efficient charg-

ing system, which enables me to keep account of each book or pamphlet that is out of the room.

The library subscribes for the following periodicals:

Annals of Tropical Medicine and Parasitology, Zeitschrift f. Hygiene u. Infektionskrankheiten Philippine Journal of Science, Series B, C, and D, Centralblatt fur Bakteriologie, Originale Journal of Parasitology and Bacteriology, Journal of Tropical Medicine and Hygiene, American Journal of Medical Science, Johns Hopkins Hospital Bulletin, Journal of Infectious Diseases, Annales de l'Institut Pasteur, American Veterinary Review, British Medical Journal, Lancet, (London), Parasitology, Pathfinder, Science.

There are sent complimentary and in exchange for Health Notes:

Monthly Cyclopedia and Medical Bulletin, California State Medical Journal, Virginia Semi-Medical Monthly, Journal of the Outdoor Life, Long Island Medical Journal, Mulford Veterinary Bulletin, Sanidad y Beneficencia, Public Health Reports, Modern Sanitation, Bacterial Therapist, Clinical Excerpts.

The Journal of the American Medical Association, American Journal of Public Health, Southern Medical Journal and Military Surgeon are given by Dr. Joseph Y. Porter, Sr. The Journal of the American Medical Association from vol. 46 to vol. 58 inclusive was given by Dr. Hiram Byrd.

The Journal of the American Medical Association is almost complete from vol. 27 to vol. 58.

American Journal of the Medical Sciences, vol. 120 to vol. 136, Centralblatt, Originale Band 12 to Band 65, almost complete, Centralblatt Referate, Band 35 to Band 53, almost complete, Annales de L'Institut Pasteur, Tome 18 to Tome 23, almost complete, British Medical Journal, from 1907 to 1911, Hygienic Laboratory Bulletins, Nos. 2 to 63, Journal of Infectious Diseases, vol. 2 to vol. 10, Journal of Hygiene, vol. 6 to vol. 11, Lancet, (London), 1878 to 1912, almost complete, Tropical Medicine and Hygiene, vol. 10 to vol. 13, Medical News, vol. 82 to vol. 84, Parasitology, vol. 1 to vol. 4, Journal of Pathology and Bacteriology, vol. 11 to vol. 15, Public Health Reports and papers, vol. 1 to vol. 33, almost complete, American Journal of Public Hygiene, vol. 18 to vol. 20, Weekly Public Health Report, vol. 2 to vol. 27, almost complete, Zeitschrift f. Hygiene u. Infektionskrankheiten, Band 70 to Band 73, Transactions of the Florida Medical Association, from 1888, complete, Annual Report State Board of Health of Florida, complete, Wellcome Research Laboratory Reports, 1904 to 1911, Sanidad y Beneficencia, complete.

There has been constructed an especially arranged magazine stand for the current numbers of the periodicals, with storage space underneath, so that all numbers of volumes can be kept

together until completed, when they are sent to the binder. When bound they are classified, marked, cataloged, etc., and arranged in the bookcases. Owing to crowded quarters there has not been much effort made to get complete sets of many of the journals, but now that the library is assuming order I shall make an effort to complete as many of the files as possible. Beginning with 1914 I shall index all the original articles in the journals, so that the information in the current numbers will be as easily found as in complete volumes.

In November I wrote to fifty health authorities of the United States asking for any back reports of the State Boards of Health and monthly bulletins. I received forty-one answers. Some merely stated that the supply was exhausted, but that the library would be placed on their permanent mailing list for all future publications. Several secretaries or libraries sent in all back numbers that could be spared, thus marking some of our files of reports complete, or nearly so.

There are a great many duplicate pamphlets, reports and bulletins on hand. A list of these and the numbers needed to complete our files will be made during the coming year, when medical librarians will be asked for exchanges.

Respectfully,
F. DOMARIS HERNDONE,
Librarian.

SUBSIDIARY STATISTICAL DATA

HYDROPHOBIA.

Treatment Administered for its Prevention by the State Board of Health, During 1913.

Case Record No.	Age	Sex and Color	Residence	Infection	Location	Date of Infection	Animal	Evidence of Rabies	Treatment		Liability
									Begun	Ended	
335	6 M*		Jacksonville	Bite	Leg	Jan.	Dog	Negri bodies Dec.	26 Jan.	16 Jan.	Indigent
336	5 F*		Jacksonville	Bite	Stomach	Jan.	Dog	Negri bodies Jan.	5 Jan.	26 Jan.	Indigent
337	5 M		Lakeland	Bite	Face and hand	Jan.	Dog	Negri bodies Jan.	15 Feb.	4 Feb.	Indigent
338	Ad M		Okahumpka	Bite	Hand	Jan.	Dog	Negri bodies Jan.	16 Feb.	5 Pay case	
339	Ad M		Cocoa	Bite	Hand	Jan.	Dog	Negri bodies Feb.	3 Feb.	22 Pay case	
340			Cocoa	Bite	Hand	Jan.	Dog	Negri bodies Feb.			
341			Cocoa	Bite	Hand	Jan.	Dog	Negri bodies Feb.			
342	14 M		Tampa	Bite	Face	Jan.	Dog	Negri bodies Feb.			
343	8 F*		Jacksonville	Bite	Ear and hand	Feb.	Dog	Negri bodies Feb.	3 Feb.	22 Pay case	
344	2 M		Ybor City	Bite	Head and face	Feb.	Dog	Negri bodies Feb.	6 Feb.	26 Indigent	
345	16 M		Jacksonville	Bite	Hand	Feb.	Dog	Negri bodies Feb.	8 Feb.	28 Pay case	
346	9 M		Jacksonville	Bite	Calf leg	Feb.	Dog	Negri bodies Feb.	10 March	2 Indigent	
347	4 M		Jacksonville	Bite	Chest	Feb.	Dog	Negri bodies Feb.	21 March	13 Indigent	
348	21 M		Bartow	Bite	Arm and hand	Feb.	Dog	Negri bodies Feb.	21 March	13 Indigent	
349	Ad M		Jacksonville	Bite	Arm and hand	Feb.	Dog	Negri bodies Feb.	22 March	14 Pay case	
350	8 F		Gainesville	Bite	Left ear	Feb.	Dog	Negri bodies Feb.	23 March	15 Pay case	
351	4 M		Tampa	Bite	Thumb	Feb.	Dog	Negri bodies March	26 March	18 Pay case	
352	4 F		Tampa	Bite	Wrist	Feb.	Dog	Negri bodies March	1 March	21 Pay case	
353	7 M		Tampa	Bite	Hand	Feb.	Dog	Negri bodies March	1 March	21 Pay case	
354	37 M		Green Cove Springs	Bite	Left arm	Feb.	Dog	Negri bodies March	2 March	22 Indigent	
355	Ad F*		Tampa	Bite	Left arm	Feb.	Dog	Negri bodies March	5 March	25 Pay case	
356	6 M*		Tampa	Bite	Left arm	Feb.	Dog	Negri bodies March	6 March	26 Indigent	

357	7 M*		Tampa	Bite	Arm	March	Dog	Clinical	March	6 March	26 Indigent
358	35 F		Jennings	Bite	Arm	March	Dog	Negri bodies March	8 March	28 Pay case	
359	6 F		Tampa	Bite	Hand	March	Dog	Negri bodies March	9 March	31 Indigent	
360	7 M		Mayo	Bite	Hand	March	Dog	Negri bodies March	13 April	2 Indigent	
361	Ad M		Live Oak	Bite	Leg	March	Dog	Clinical	21 April	10 Indigent	
362	39 M		Parish	Scratch	Finger	March	Cow	Clinical	23 April	12 Indigent	
363			Key West	Bite	Finger	March	Cow	Clinical	23 April	12 Indigent	
364	44 M		Jacksonville	Bite	Hand	March	Dog	Clinical	23 April	12 Pay case	
365	6 M		Jacksonville	Bite	Leg	March	Cat	Negri bodies March	23 April	12 Indigent	
366	F*		Jacksonville	Bite	Leg	March	Cat	Negri bodies March	23 April	12 Indigent	
367	Ad M		Jacksonville	Bite	Finger	March	Dog	Clinical	26 April	15 Indigent	
368	Ad M		Jacksonville	Bite	Hand	March	Dog	Clinical	26 April	15 Indigent	
369	11 M*		Jacksonville	Bite	Hand	March	Dog	Clinical	26 April	15 Indigent	
370	13 M		Jacksonville	Bite	Hand	March	Dog	Clinical	26 April	15 Indigent	
371	32 M		Jacksonville	Bite	Hand	March	Dog	Clinical	26 April	15 Indigent	
372	Ad M*		Jacksonville	Bite	Thumb	March	Dog	Negri bodies March	27 April	16 Indigent	
373	7 M		Tampa	Bite	Left side	March	Dog	Clinical	27 April	16 Indigent	
374	28 M		Tampa	Bite	Calf leg	March	Dog	Negri bodies March	31 April	20 Pay case	
375	Ad M*		Tampa	Bite	Hand	March	Dog	Negri bodies April	3 April	24 Pay case	
376	57 M		Tampa	Bite	Hand	April	Dog	Negri bodies April	3 April	24 Pay case	
377	6 M		Jacksonville	Bite	Right thigh	April	Dog	Negri bodies April	5 April	27 Indigent	
378	12 M		Tampa	Bite	Leg	April	Dog	Negri bodies April	5 April	27 Indigent	
379	30 M		Jacksonville	Bite	Finger	March	Dog	Negri bodies April	5 April	27 Indigent	
380	50 F		Tampa	Bite	Finger	April	Dog	Negri bodies April	6 April	26 Indigent	
381	5 M		Tampa	Bite	Finger	April	Dog	Negri bodies April	10 April	30 Pay case	
382	26 M		Bartow	Bite	Finger	March	Dog	Clinical	10 April	30 Pay case	
383	35 M*		Jacksonville	Bite	Left leg	March	Dog	Negri bodies April	11 May	1 Pay case	
384	4 F*		Jacksonville	Bite	Eye brow	April	Dog	Negri bodies April	11 May	1 Pay case	
385	3 F		Jacksonville	Bite	Finger	April	Dog	Clinical	14 May	4 Indigent	
386	4 F		Jacksonville	Bite	Finger	April	Dog	Negri bodies April	16 April	18 Indigent	
387	14 F*		Jacksonville	Bite	Left hand	April	Dog	Negri bodies April	17 May	7 Pay case	
388	27 M		Tampa	Bite	Right hand	April	Dog	Negri bodies April	16 May	7 Indigent	
389	22 M		Jacksonville	Bite	Thigh	April	Dog	Negri bodies April	18 April	24 Indigent	
390	8 M		Bowling Green	Bite	Right arm	April	Dog	Clinical	21 May	11 Pay case	
391	10 M		Bowling Green	Bite	Toe	April	Dog	Negri bodies April	23 April	25 Indigent	
392	71 M		Ehren	Bite	Finger	April	Dog	Negri bodies April	27 May	17 Pay case	

HYDROPHOBIA—(Continued).

Case Record No.			Sex and Color	Residence	Infection	Location	Date of Infection	Animal	Evidence of Rabies	Pasteur Treatment		Liability
Age										Begun	Ended	
393	45 F	F	Ehren	Bite	Bite	Finger	April	12 Dog	Negri bodies	April	27 May	17 Pay case
394	7 F*	M	Mayo	Bite	Bite	Shoulder	---	Dog	Clinical	May	5 May	25 Indigent
395	9 M	F	Tampa	Bite	Bite	Right eyelid	May	10 Dog	Negri bodies	May	14 June	3 Pay case
396	7 F	F	Gainesville	Bite	Bite	Right cheek	May	15 Dog	Negri bodies	May	21 June	10 Pay case
397	35 M	M	Gainesville	Bite	Bite	Buttox	May	24 Dog	Negri bodies	May	28 June	17 Pay case
398	30 M	M	Micosukee	Bite	Bite	---	May	26 Cat	Clinical	June	1 June	21 Indigent
399	20 M*	M	Jacksonville	Bite	Bite	Finger	May	23 Dog	Clinical	June	1 June	23 Indigent
400	Ad M*	M	Jacksonville	Bite	Bite	Hand	May	28 Dog	Clinical	June	4 June	24 Indigent
401	6 F	F	Daytona	Bite	Bite	Leg	May	Dog	Negri bodies	June	5 June	25 Pay case
402	6 F	F	Alachua	Bite	Bite	Hand	June	Dog	Negri bodies	June	6 June	26 Pay case
403	35 M	M	Newberry	Bite	Bite	Left leg	June	Dog	Clinical	June	12 July	2 Indigent
404	35 M	M	Jacksonville	Bite	Bite	Calf leg	June	Dog	Negri bodies	June	12 July	2 Indigent
405	23 M	M	Jacksonville	Bite	Bite	Right hand	June	Dog	Negri bodies	June	15 July	5 Pay case
406	Ad M*	M	Jacksonville	Bite	Bite	Leg	June	Dog	Negri bodies	June	15 July	5 Indigent
407	8 F	F	Tampa	Bite	Bite	Thumb	June	Dog	Negri bodies	June	26 July	16 Indigent
408	28 M*	M	Gainesville	Bite	Bite	Leg and hand	June	Cat	Clinical	July	26 July	16 Indigent
409	49 M	M	Tampa	Bite	Bite	Finger	June	Cat	Negri bodies	July	2 July	22 Indigent
410	27 M	M	Jacksonville	Bite	Bite	Left hand	June	28 Cat	Negri bodies	July	2 July	22 Indigent
411	10 F	F	Jacksonville	Scratch	Scratch	Ear	June	4 Dog	Negri bodies	July	2 July	22 Indigent
412	4 M	M	Gainesville	Bite	Bite	---	July	Dog	Negri bodies	July	9 July	29 Indigent
413	9 F	F	Sanford	Bite	Bite	Thumb	---	Dog	Negri bodies	July	10 July	30 Pay case
414	6 M	M	Jasper	Bite	Bite	Hand and leg	July	Dog	Negri bodies	July	15 Aug.	4 Pay case
415	36 M	M	Jacksonville	Bite	Bite	Finger	July	12 Cat	Negri bodies	July	16 Aug.	5 Indigent
416	26 M*	M	Gainesville	Bite	Bite	---	July	17 Dog	Negri bodies	July	19 Aug.	26 Indigent

417	7 M	M	Jacksonville	Bite	Left leg	July	9 Cat	Negri bodies	July	19 Aug.	8 Indigent
418	34 F	F	Jacksonville	Sore	Thumb	Aug.	16 Man	Negri bodies	Aug.	20 Sept.	9 Pay case
419	36 M	M	Jacksonville	Sore	Hand	Aug.	16 Man	Negri bodies	Aug.	23 Sept.	12 Pay case
420	27 M	M	Jacksonville	Scratch	Hand	Aug.	16 Man	Negri bodies	Aug.	23 Sept.	12 Unsettled
421	17 M	M	Jacksonville	Bite	Hand	Aug.	16 Man	Negri bodies	Aug.	27 Sept.	16 Pay case
422	Ad F	F	Jacksonville	Bite	Hand	Aug.	23 Cat	Negri bodies	Aug.	27 Sept.	16 Pay case
423	50 M	M	Tampa	Bite	Hand	Aug.	23 Cat	Negri bodies	Aug.	31 Sept.	20 Pay case
424	14 M	M	Favoretta	Bite	Right arm	Sept.	1 Dog	Negri bodies	Aug.	6 Sept.	26 Indigent
425	54 M	M	Jacksonville	Bite	Left leg	Sept.	10 Dog	Clinical	Sept.	15 Oct.	5 Indigent
426	33 F	F	Jacksonville	Bite	Left leg	Sept.	10 Dog	Clinical	Sept.	17 Oct.	7 Pay case
427	55 F	F	Jacksonville	Sore	Eye	Sept.	Man	Clinical	Sept.	24 Oct.	14 Pay case
428	4	M*	Laurel Hill	Bite	Hand	Sept.	22 Dog	Negri bodies	Oct.	22 Nov.	11 Indigent
429	26 M*	M	Starke	Bite	Knee	Sept.	19 Dog	Clinical	Oct.	29 Nov.	18 Indigent
430	35 M*	M	Starke	Bite	Hand	Oct.	26 Horse	Clinical	Oct.	Oct.	27 Indigent
431	8 M	M	Orlando	Bite	Thumb	Oct.	26 Horse	Clinical	Oct.	1 Nov.	21 Pay case
432	11 F*	F	Jacksonville	Bite	Ankle	Oct.	26 Squirrel	Negri bodies	Nov.	5 Nov.	25 Indigent
433	39 M	M	Jacksonville	Bite	Left thumb	Nov.	2 Dog	Clinical	Nov.	6 Nov.	28 Indigent
434	60 M	M	Bronson	Bite	Leg	Nov.	14 Dog	Clinical	Nov.	17 Dec.	7 Pay case
435	12 F	F	Live Oak	Bite	Finger	Nov.	14 Dog	Negri bodies	Nov.	20 Dec.	10 Pay case
436	3 F	F	Cedar Keys	Bite	Finger	Nov.	14 Dog	Clinical	Nov.	21 Dec.	11 Unsettled
437	45 F	F	Live Oak	Bite	Finger	Nov.	14 Dog	Negri bodies	Nov.	23 Dec.	13 Indigent
438	2 F	F	High Springs	Bite	Finger	Nov.	16 Cat	Negri bodies	Nov.	30 Dec.	20 Pay case
439	19 M	M	Jacksonville	Bite	Left arm	Nov.	16 Cat	Negri bodies	Nov.	30 Dec.	20 Pay case
440	8 M	M	Tampa	Bite	Left arm	Dec.	2 Dog	Clinical	Dec.	6 Dec.	26 Pay case
441	25 M*	M	Wauchula	Bite	Calf leg	Dec.	27 Dog	Clinical	Dec.	31	Indigent

*Negroes

EXPLANATORY NOTES:

- Case 340: Patient left State before first dose arrived; treatment cancelled.
 Case 341: Patient left State before first dose arrived; treatment cancelled.
 Case 342: It was not known at first that dog had bitten anyone. However, child was reported to have been bitten after head had been microscopically examined with negative report, and destroyed, thus too late for animal inoculation.
 Case 363: Treatment was discontinued upon investigation by State Health Officer. Dog not rabid.
 Case 366: Did not report for treatment. Cancelled.
 Case 372: Did not report for treatment.
 Case 375: Ran away when first dose arrived. Cancelled.
 Case 376: Refused treatment when first dose arrived. Cancelled.
 Case 384: Treatment ordered owing to location of wound, but dog did not show symptoms of rabies afterward. Treatment cancelled.
 Case 387: Patient did not report for full treatment. Cancelled.
 Case 389: After biting, dog disappeared. Treatment was ordered. About 4 days later dog returned to its owner. Treatment was then cancelled.
 Case 395: Patient died with symptoms of hydrophobia. (See Case No. 2, of Deaths.)
 Case 411: In this case examination was made of brain of companion cat. Cat which scratched patient died.
 Case 418: Patient attended case of hydrophobia and administered cold cloths to patient's mouth. Sore on thumb believed to have been infected.
 Case 419: Partly healed over sore on hand believed to have been infected when attending man with hydrophobia.
 Case 420: Scratch received when attending man with hydrophobia.
 Case 426: Received saliva in eye, from human patient having hydrophobia, while nursing.
 Case 427: Sores on hand infected from saliva of dog.
 Case 430: Upon further investigation it was found treatment not necessary. Cancelled.

CASE RECORD, DEATHS FROM HYDROPHOBIA, 1913.

CASE No. 1. October 17, 1912, Jacksonville, white male child, aged three years, attacked and knocked down by large cur dog running at large. Bitten severely on hand, nose and mouth through palate. Dog killed and head examined by Central Laboratory of the State Board of Health; found positive for rabies. Intensive schema of Pasteur treatment was given 37 hours after receiving bite. From location of bite it was feared child would develop hydrophobia even before treatment was completed but after treatment was completed and some time had elapsed, the physician and parents began to rest easier, hoping he would escape the disease. However, hydrophobia finally developed. Death occurred March 14, 1913, or nearly five months after date of receiving bite. It would appear that wound in this case was too severe and located at too short a distance from the spinal cord and brain to have been overcome by any treatment.

CASE No. 2. May 10, 1913, Tampa, white male child, aged 9 years, bitten under right eyelid by pet dog, one-half inch laceration. Examination of dog's brain was positive for rabies. The dog gave history of having been bitten by a supposedly rabid animal about three weeks prior to May 10. It is stated by neighbors that the dog appeared to be in good health until May 10, when he showed a tendency to attack other dogs, but was still very playful with children. On the afternoon of May 10th he suddenly became vicious, attacking the child above mentioned, tore its eyelid at the inner canthus, after which the dog rushed down the road biting anything. Dog was caught and killed. Number of other dogs and several head of cattle were bitten by this dog. Could learn of no other human. Child received first dose of Pasteur treatment May 14—completed June 3. Attending physician was advised of child's demise 3:30 a. m. June 9, and reached bedside 10 minutes after death, finding him with temperature of 104 and a thick, frothy mucous coming from mouth and nostrils. Parents say he choked to death. Had slight fever day before, but no attention paid to it until 12 o'clock that night, after father had noticed it was very high and child complained of severe cramps in the stomach and a choking feeling, which rapidly grew worse. 135 hours and 30 minutes elapsed from last treatment until death. This appeared to be another case where wound was too close to spinal cord and brain for treatment to be of avail. (Pasteur treatment case No. 395).

CASE No. 3. August, 1913, near Jacksonville, male adult, white, farmer, bit by cur dog—small scratch on hand. Paid no attention to it and did not take Pasteur treatment. Developed hydrophobia a few weeks later, same month. Taken to St. Luke's Hospital, where he died in a few hours with pronounced symptoms of hydrophobia. Microscopical examination of brain showed Negri bodies.

CASE No. 4. August, 1913, Jacksonville, male adult, white, street car conductor, bit by dog. Thought nothing of it and did not take Pasteur treatment. A few weeks later began to develop symptoms of hydrophobia, which became very pronounced and resulted in death September 13th.

CASE No. 5. October, 1913, Jacksonville, male adult, white, employee Armour & Company. Said he had been bitten by a dog some time previous but gave the incident no thought and failed to take Pasteur treatment. Began to develop symptoms and walked to county hospital, where later he became violent and it was found necessary to put him in straight jacket. Like in all other cases, every effort was made to counteract the disease, but death occurred four days and a half after first symptoms. Upon examination of brain Negri bodies were found.

CASE No. 6. December, 1913, Jacksonville, male adult, Syrian, operator of fruit stand. Telephone call to State Board of Health. Dr. Hanson investigated and found evidence of hydrophobia. Patient walked unassisted to St. Luke's Hospital, where the disease rapidly developed. At intervals raving maniac with the most violent symptoms of hydrophobia, followed by exhaustion and death. Microscopical examination of brain showed Negri bodies.

HYDROPHOBIA.

Treatment Administered for its Prevention, by the State Board of Health,
During 1913.

Distribution of Cases by Counties and Towns

County and Town	January	February	March	April	May	June	July	August	September	October	November	December	Total	
													Towns	Counties
Alachua		1			2	3	2				1		1	9
Alachua						1							1	
Gainesville		1			2	1	2						6	
High Springs											1		1	
Newberry						1							1	
Baker														
Bay														
Bradford										2			2	
Starke									2**				2	
Brevard		3											3	
Cocoa		3*											3	
Calhoun													3	
Citrus														
Clay														
Green Cove Springs			1										1	
Columbia			1										1	
Dade														
De Soto														
Bowling Green				2							1		3	
Wauchula				2									2	
Duval	2	5	9	8		5	4	5	3		3	1	44	
Jacksonville	2	5	9*	8		5	4	5	3		3		44	
Escambia														
Franklin														
Gadsden														
Hamilton														
Jasper			1				1						2	
Jennings							1						1	
Hernando			1										1	
Hillsborough		2	8	7	1	1	1	1					22	
Tampa		2	8	7*	1	1	1	1			1		22	
Holmes														
Jackson														
Jefferson														
Lafayette														
Mayo			1		1								2	
Lake	1		1		1								2	
Okahumpka	1												1	
Lee													1	
Leon														
Micosukee						1							1	
Levy						1							1	
Bronson										2			2	
Cedar Keys										1			1	
										1			1	

HYDROPHOBIA.—(Continued).

County and Town	January	February	March	April	May	June	July	August	September	October	November	December	Total	
													Towns	Counties
Liberty														
Madison														
Manatee														
Parish			1										1	
Marion			1										1	
Monroe														
Key West			1**										1	
Nassau														
Orange											1		1	
Orlando														
Osceola											1		1	
Palm Beach														
Pasco														
Ehren				2									2	
Pinellas				2									2	
Polk														
Bartow	1	1		1									3	
Lakeland		1		1									2	
Putnam													1	
Santa Rosa														
Seminole														
Sanford							1						1	
St. John							1						1	
St. Lucie														
Sumter														
Suwanee														
Live Oak			1								2		3	
Taylor														
Volusia														
Daytona						1			1				2	
Favoretta						1							1	
Wakulla									1				1	
Walton										1			1	
Laurel Hill										1			1	
Washington														
Totals	4	12	23	20	4	11	9	6	4	3	9	2	107	107

*Cocoa, 2 cases ordering Pasteur treatment left State before first doses arrived. Jacksonville, 2 patients ordering Pasteur treatment did not appear for its administration. Tampa, 2 patients ordering Pasteur treatment refused treatment upon its arrival.

**Starke, 1 case never received treatment, as it was later found unnecessary. Key West, treatment never administered, as it was later ascertained that dog was not rabid.

DISTRIBUTION OF VACCINE POINTS, 1913

County	January	February	March	April	May	June	July	August	September	October	November	December	Total
Alachua	140	630	1080	280	110	230	20		30		20		2540
Baker													
Bay													
Bradford	10	30	10	520	40					20			630
Brevard	10	30				80		20		20			160
Calhoun			20							30	10		60
Citrus		20		30		30							80
Clay				40									40
Columbia			110		20		20						150
Dade		100		150	310								560
DeSoto													
Duval	395	85	165	135	90	35	5	20	52	266	790	176	2214
Escambia	4850	1000		200		50		30					6130
Franklin													
Gadsden	50	50	50	50	50		50	100		200			600
Hamilton			20	30	60		20	20	40			24	214
Hernando			10										10
Hillsboro	30	150	70	275	320	70	140		30	90	100		1275
Holmes		10			10								20
Jackson					50								50
Jefferson	80			60									140
Lafayette													
Lake			30	80									110
Lee							50						50
Leon	100	30		50		100	50						330
Levy		40	190	20	20	30	30						330
Liberty					70								70
Madison		40	50		40		40						170
Manatee	20	130	130	50	100	20	50						500
Marion		30	1290	185		10		10					1525
Monroe					20							50	70
Nassau		20											20
Orange	30	30	20		30			10					120
Osceola		10	60										70
Palm Beach								30					30
Pasco			10	20									30
Pinellas	50		50			20	100				10		230
Polk	70	20	180			80	90		20	10	60		530
Putnam	260		20		180	10							470
Santa Rosa	40		30										70
Seminole													
St. Johns	70	60	10	20	130	10				60	120		510
St. Lucie			20	50		10							80
Sumter			20										20
Suwanee				20									20
Taylor		50	20										70
Volusia		30	10							10			50
Wakulla													
Walton		50											50
Washington													
Totals	320	2645	3675	2265	1630	805	665	240	172	636	1080	380	20398

REPORTED CASES OF SMALLPOX IN FLORIDA, 1913

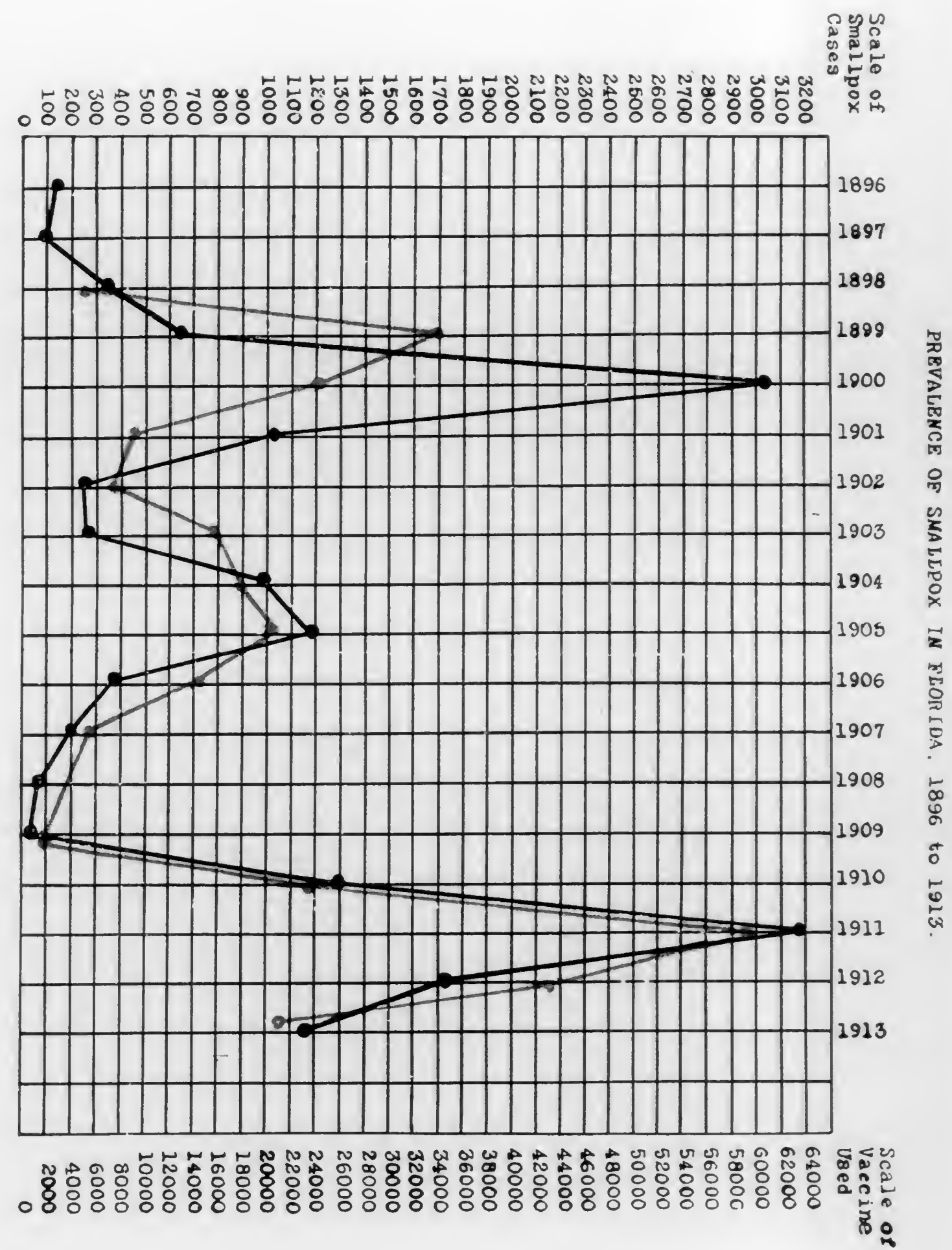
County	January	February	March	April	May	June	July	August	September	October	November	December	Total	Deaths
Alachua	11	17	11	2	1	9		9		13	1	1	75	1 (B)
Baker														
Bay														
Bradford		1		9						9	1		20	
Brevard					1	3		1		1			6	
Calhoun			6								1		7	
Citrus				1		7							8	
Clay														
Columbia			4				2						6	
Dade		1		4	2			9					16	
DeSoto														
Duval	21	25	29	19	37	18	38	3	4	15	6	13	228	2 (B)
Escambia	182	137	127	59	20	11	8	3	3	1	1		552	
Franklin														
Gadsden														
Hamilton														
Hernando				1									1	
Hillsboro	4	1	1			6	3			1	3		22	
Holmes														
Jackson						1							1	
Jefferson	8			2									10	
Lafayette														
Lake														
Lee							1	3					4	
Leon		4		3		3							10	
Levy		10	2	3	2	1							18	
Liberty														
Madison			1										1	
Manatee	5	6	3	3	10	11	1				2		41	
Marion		1	2	2	1							1	7	1*(W)
Monroe														
Nassau		1											1	
Orange	1		4										5	
Osceola			2										2	
Palm Beach			1										1	
Pasco	1		1										2	
Pinellas	1		5		1	1				3	5		16	
Polk			1		1	4				8			22	
Putnam	6	1	1		5	4	4	1					22	
Santa Rosa	2	2	10	1	1		1						17	
Seminole														
St. Johns	4	2	3	5	11	6	5						36	
St. Lucie			2		1	2							5	
Sumter			1			1							2	
Suwanee										1			1	
Taylor		1											1	
Volusia														
Wakulla														
Walton														
Washington														
Totals	246	211	217	113	94	88	71	29	8	54	17	18	1166	4

*Hemorrhagic smallpox.

EXPLANATION OF THE ACCOMPANYING CHART:

The black lines in chart on opposite page represent the number of cases of smallpox reported to the State Board of Health by years, from 1896 to 1913.

The red lines represent the number of vaccinations done by years—1896 to 1913.



PREVALENCE OF DISEASE AS DIAGNOSED BY THE LABORATORIES OF THE STATE BOARD OF HEALTH, 1913.

[illegible]

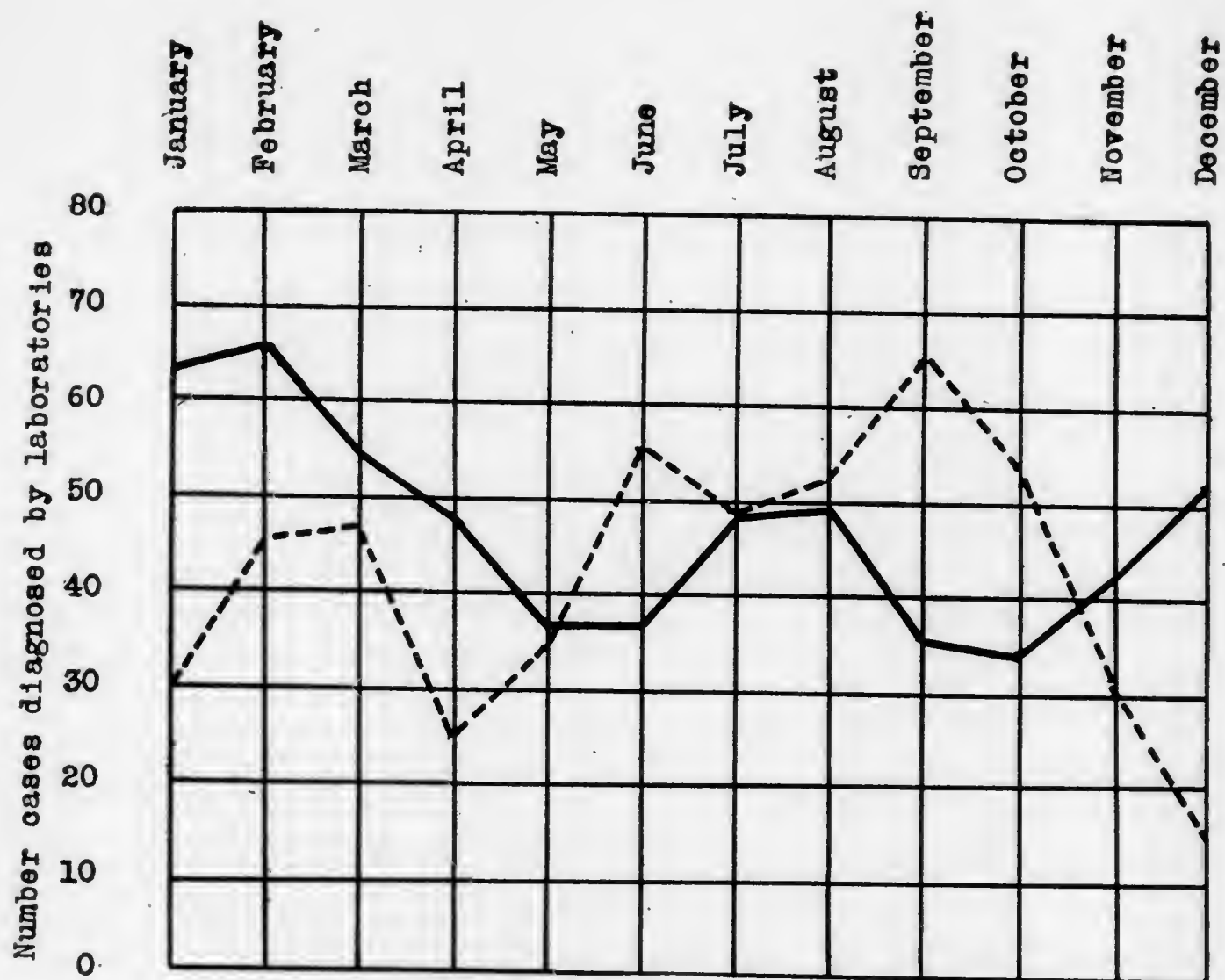
A Study in the Seasonal Prevalence of Typhoid Fever and Malaria as Diagnosed
by the Laboratories of the State Board of Health

with

Statement Regarding Seasonal Prevalence of Flies and Mosquitoes in Florida,
by J. R. Watson, Entomologist, Florida Agricultural
Experiment Station

and

Climatological Data Compiled by A. J. Mitchell, Section Director,
U. S. Weather Bureau.



PREVALENCE OF TYPHOID AND MALARIA AS DIAGNOSED BY
LABORATORIES OF THE STATE BOARD OF HEALTH, 1913

CHART 1.

Solid line indicates prevalence of typhoid
Broken line indicates prevalence of malaria

Statement Regarding Seasonal Prevalence of Flies and Mosquitoes in Florida, by J. R. Watson, Entomologist, Florida Agricultural Experiment Station.

In answer to an inquiry by the office, Mr. Watson gives the following:

FLIES.

Your letter reached me this morning. I have no detailed statistics concerning the seasonal prevalence of flies in Florida. However, I can supply, from my own observation, I believe, the gross facts of the case. Flies, here at Gainesville, at least, are apparently much worse during the winter than during the summer provided the weather is not too cold. I should say they reached their maximum in April and possibly extending into May, with a marked decrease as soon as the rainy season sets in, and then slowly rising during the winter. Of course they are not abroad much when the weather is too cold but warm spells of some weeks duration in the winter, such as we had last winter, will bring them out. The rapid decrease of their numbers in the summer is due to their fungus parasites, which, as in the case of whitefly and scale insects, become very fatal to them at that time. Probably too, the heavy rains wash out their breeding places and perhaps have some effect upon their numbers in that way.

This tabulation is a thing that ought to be done, and I believe I shall endeavor to devote a little more time and attention to it than I have heretofore, so that I may have some more detailed statistical information.

MOSQUITOES.

Concerning mosquitoes, I have no definite information on hand now except, of course, the general knowledge that their time of greatest abundance is during the latter part of the rainy season when they have had time to breed all summer. I should say September is the time of the greatest abundance. My assistant, Mr. Loftin, made his thesis on this subject last year. I believe we can obtain from him other detailed statistics on these points as he kept a great many mosquito traps and kept tab on the number of mosquitoes caught each day. I know there was a marked change in the species of mosquitoes caught. *Anopholes* were most abundant in September and October whereas *Culex* predominated in his traps in the early part of the summer. I will look up his thesis and if the details are not given there I will write to him and obtain them so far as possible for you.

* * * * *

In further answer to your recent inquiry concerning mosquitoes, I submit the following: Mr. Loftin, who took his master's degree here last year, worked on mosquitoes as his thesis subject. Incidentally with this work he had a series of traps and he kept accurate records of the catch from September to May inclusive. Below I am giving results of the catches in two of his traps situated at a distance of something over half a mile apart in either direction from the campus. You will notice the two traps agree closely as to the date of the greatest abundance and the following are averages for

each night for the month. The actual catch varies so from night to night due to temperature, etc., that the averages are much safer.

1912		1913	
September	-----21 30.1	January	-----12 15
October	-----44.2 78.7	February	-----14.5 25
November	-----14.3 23.2	March	-----31.1 49
December	-----14.2 32	April	-----12.2 30
		May	-----10.5 22.3

You will notice from this that October was by all means the month of most numerous mosquitoes. In quoting from memory in my last letter I believe I stated it to be September. You will notice that the amount caught that month was considerably more than twice the average number. Both traps seem to agree in having a secondary climax in March, which, after October, was the month of most numerous catch of mosquitoes in the traps.

Mr. Loftin states that *Culex quinquefasciatus* made up 98.22 per cent. of the total number caught. The others were *Anopholes crucians*, and *A. quadrimaculatus*, with an occasional *Stegomyia* and *Psorophora*. Mr. Loftin in his recent letter, did not supply me with the date as to when the *Anopholes* became most abundant but, quoting again from memory, I am under the impression that it was later. I know at least that later in the year in November or December *Anopholes* was relatively much more abundant in proportion to *Culex* than in September. It is to be regretted that the records are not available for June, July and August, but quoting again from my own observations I would say that during those months their numbers compared pretty closely with those for September with the exception of June, which is probably lower.

The following climatological charts and table were supplied by Mr. A. J. Mitchell, Section Director of the U. S. Weather Bureau, Jacksonville, Fla.

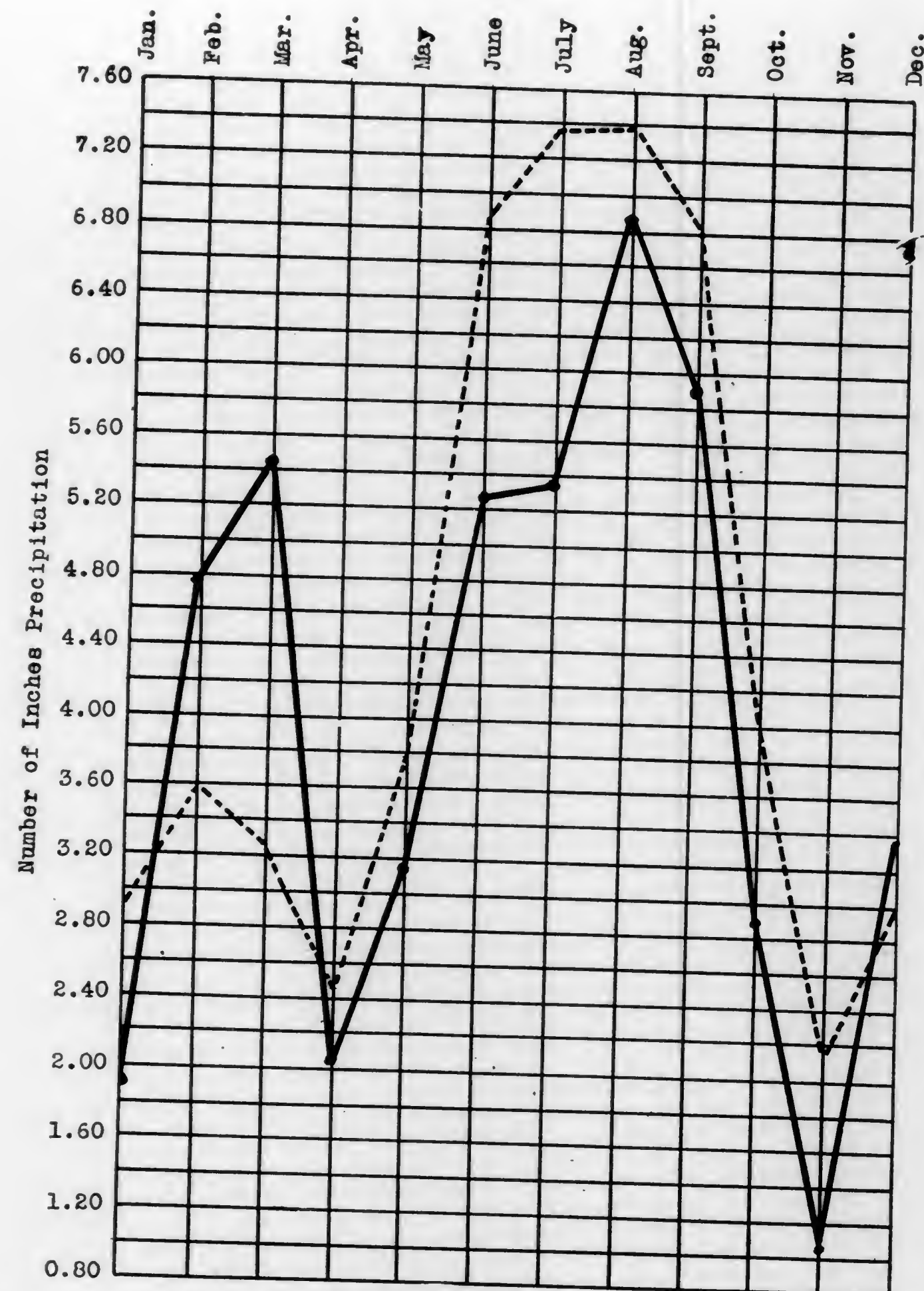
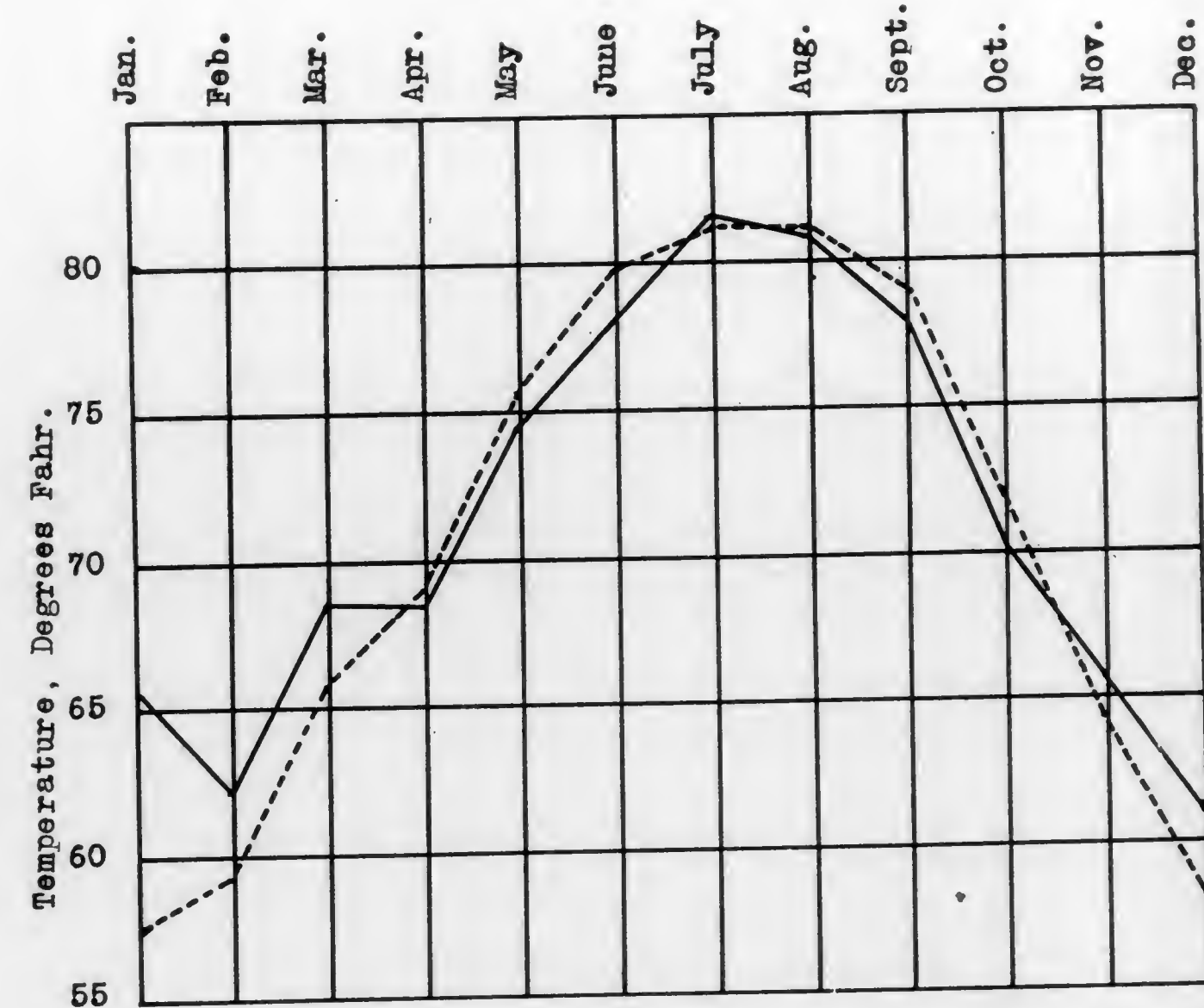


CHART 2. MONTHLY NORMAL AND MEAN PRECIPITATION, FLORIDA, 1913
Solid line indicates mean precipitation
Broken line indicates normal precipitation



MONTHLY NORMAL AND MEAN TEMPERATURES, FLORIDA, 1913

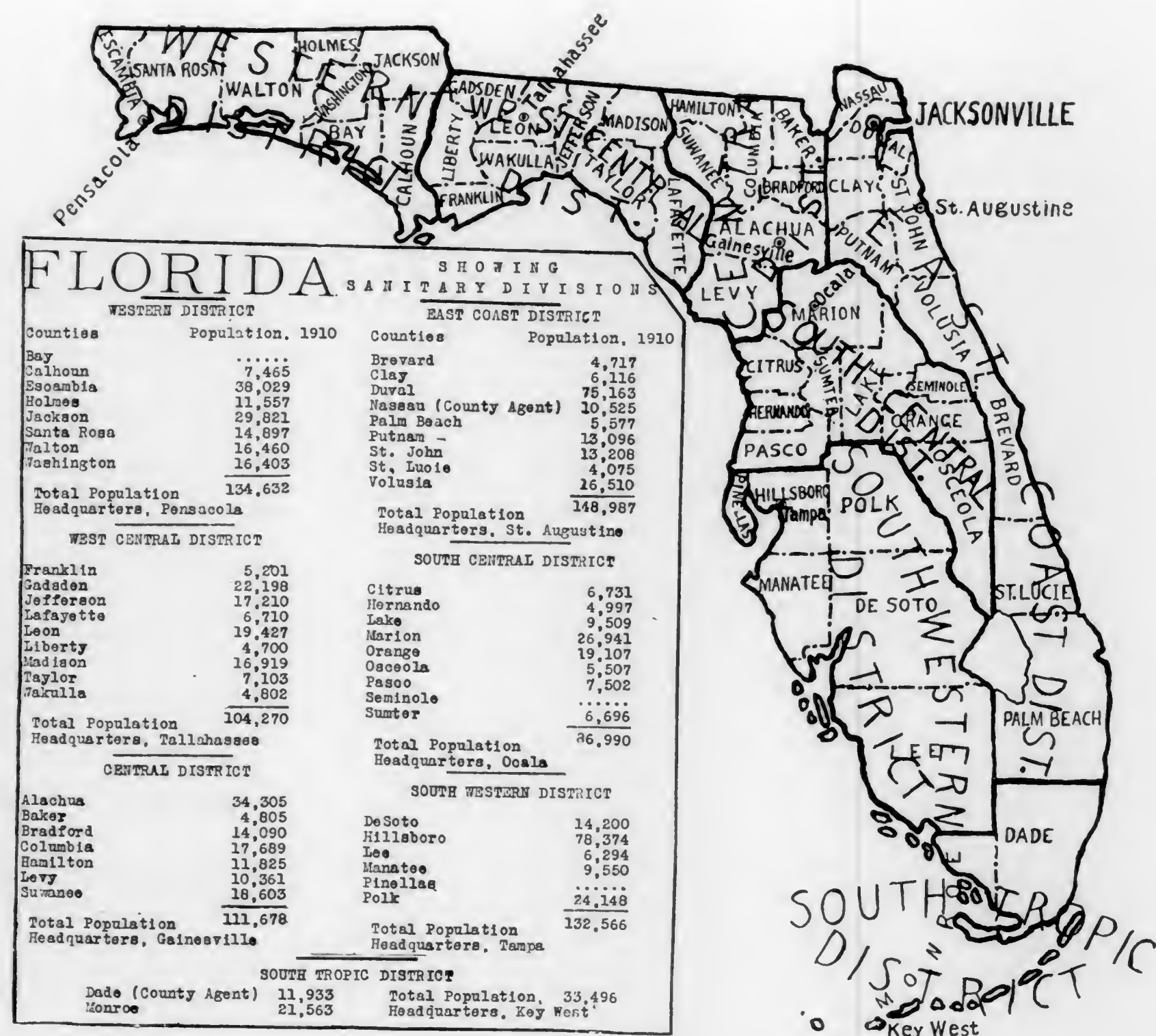
CHART 3. Solid line indicates mean temperature
Broken line indicates normal temperature

MONTHLY SUMMARY, 1913

Month	TEMPERATURE				PRECIPI-TATION		AVERAGE NO. DAYS				WIND
	State Average	Departure from Normal	Highest	Lowest	State Average	Departure from Normal	Rain or more	Clear	Partly Cloudy	Cloudy	Prevailing Direction
January	65.6	*8.2	90	30	1.91	†1.04	6	15	10	6	SE
February	62.1	*2.2	90	28	4.78	*1.60	9	11	9	8	NE
March	68.5	*2.4	91	32	5.43	*2.52	12	10	12	9	NE
April	68.4	†1.1	93	38	2.02	†0.59	4	20	7	3	SE
May	74.4	†1.3	100	47	3.16	†0.98	7	17	10	4	E
June	78.1	†1.4	103	50	5.28	†2.17	10	13	12	5	SE
July	81.7	*0.7	104	61	5.36	†1.94	12	12	16	3	SE
August	80.7	†0.5	101	62	6.87	†0.53	14	9	16	6	SE
September	78.0	†1.1	98	41	5.89	†1.42	11	12	12	6	E
October	70.2	†2.3	98	31	2.91	†1.11	5	19	7	5	NE
November	65.7	*0.9	89	25	1.04	†1.30	4	14	11	5	NE
December	61.1	*2.2	85	23	3.37	*0.71	8	12	10	9	NE

*Above.

†Below.



REPORTS OF ASSISTANTS TO THE STATE HEALTH OFFICER

DR. CHAS. WM. BARTLETT,
DR. C. W. D'ALEMBERTE,
DR. JOSEPH Y. PORTER, JR.,
DR. W. P. CRIGLER,
DR. J. E. TAYLOR,
DR. M. E. HECK,
DR. C. H. DOBBS.

DR. E. W. DIGGETT,
(On Special Service to Seminole Indians.)

DR. JAMES M. JACKSON,
DR. D. G. HUMPHREYS,
Agents of the State Board of Health.

REPORT OF DR. CHARLES WM. BARTLETT

SOUTHWESTERN DISTRICT

Tampa, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—In making my annual report this year, I have to deal, during the first half of the year, with Hillsborough County, and especially Tampa, and for the last half of the year, in addition to Tampa and Hillsborough County, with the counties of Pinellas, Polk, Manatee, DeSoto, and Lee, all of which I have visited as Assistant to the State Health Officer.

The information relative to conditions in the various counties has been obtained by personal interviews with the leading physicians in the principal towns.

Physicians of this section do not report all the cases of infectious diseases coming under their care, but by examining the laboratory records, as they avail themselves extensively of this privilege, a fair idea of the conditions prevailing, may be obtained. In proof of this statement, I find that the data given me by the physicians in the different counties corresponds very closely to the specimens submitted to the laboratory for examination.

The number of typhoid and diphtheria cases taken from our records may be considered as approximately the number of cases that have occurred, as hardly a case of either of these diseases comes under a physician's charge in our days, without specimens being sent to the laboratory.

The contagious diseases prevailing in Tampa during the year 1913 have been typhoid fever, diphtheria, smallpox and scarlet fever. We began the year with forty cases of typhoid fever, and it continued semi-epidemic until April, when it dropped from nineteen to four cases. Comparing the typhoid cases of the entire year, we find about the same number as in 1912. As a matter of fact

we had one case more in 1913. On the other hand, if we take the last half of the year, although there has not been a remarkable increase in any given month, the number of cases has been larger—sixty-three for 1913 and forty-eight for the same period of 1912. In 1912 there was an increase from four cases in November to twenty-nine in December, which increase continued to April, as above stated. We are closing the year 1913, with eight cases only, as against forty cases at the same period of last; and it seems, judging from the last few years, that this is the month when we were in danger of the typhoid increase. Therefore, such a decrease during this period of 1913 may indicate that we are going to have very few cases during the year 1914.

The condition, reported in previous years, about the Seventh Avenue road going to Gary, has been greatly improved, as the parallel open ditch, where the peddlers used to wash vegetables sold in Tampa, has been covered.

As a whole, typhoid has not been as prevalent in my district this year as formerly.

Simply the collection, without individual study, of a number of cases of typhoid fever, will not give any information as to the cause and prevention of the same. This being true, during the last half of the year 1913, thirty-eight cases have been thoroughly investigated by myself and the Sanitary Patrolman of Hillsborough County, and we found about 73 per cent. (27 cases) living in unscreened houses. This does not cover the whole number of cases exposed to fly infection. Out of eleven screened houses having typhoid fever patients, six of the patients took meals away from home. Therefore, about 88 per cent. of the typhoid cases investigated were, practically speaking, people who live in unscreened houses. We failed to ascertain in this investigation how many of the screened houses destroyed the fly after it once obtained admission, but this data will be collected in the investigations made for 1914.

Out of eleven screened houses, eight had open closets within twenty-five feet of their premises; and eleven of the total of thirty-eight cases, had previous cases of typhoid in the neighborhood. Twenty-eight cases had open closets within five hundred feet.

Investigating the food supply, we found that among twenty-eight patients taking milk, the name of the same dairyman appeared

only twice. This seems to prove that infection cannot be attributed to milk. The raw food consumed by these thirty-eight patients was practically negligible, and apparently would not be a possible focus of infection.

The part played by lack of proper sewerage connections can be seen from the location of the cases as outlined below:

Four cases in Tampa proper, sewerage connection.
Four cases in Hyde Park, sewerage connection.
Six cases in Tampa Heights and Ybor City, sewerage connection.
Twenty-four cases in Northwestern Tampa, principally open closets.

As stated above, the larger number of cases occurred in the northwestern part of the city, where open closets are the rule, and sewerage connections the exception. There were approximately ten open closets within five hundred feet of each case of typhoid. It is well to call attention to the fact that Hyde Park, where only four cases have been reported during the last six months, suffered severely in the winter of 1911.

From the report submitted by Glenn Smith, Registrar of Vital Statistics, we find that nine deaths were due to typhoid fever during the last six months of 1913. This will seem a large percentage of deaths to the sixty-three reported cases, but in searching the death records, we find that only two of the cases had been reported to this office. The death certificate of one reads, "Typho-Malaria Fever," and the remaining six cases seem to have been diagnosed clinically. This difference between the number of cases reported and the number of death certificates has been noted, and the physician at fault has been notified of his failure to report these cases in the past, and warned as to the future.

As reported to you in the early part of the year, we have tried to induce the city authorities to have open closets screened, but this has not been done, because of the expectation of having a sewerage system built. Another effort will now be made to induce such screening, as the prospect for sewerage connection for the outside districts where typhoid seems to have been prevailing, is not bright at present.

Smallpox has been present during the year 1913, not only in Hillsborough County, but in every county I have visited. The total number of cases treated at the Isolation Hospital is 63; 35 white

and 28 colored people. August and September were the only two months free from smallpox. The largest number was in February, when we had fifteen cases. The number of people vaccinated by me is 652; vaccinated by physicians in Tampa and outside districts, 323, making a total of 975 vaccinations during the year 1913. One hundred vaccine points have been laid aside as old ones. The applications for vaccination have been less this year than any other. The reports I have received from the different counties have been given in a general way, but I believe reports of this disease are made to the Jacksonville office.

The smallpox situation has been thoroughly covered in my reports of same from time to time during the year, and our tribulations in the vaccination line have been so often dwelt upon, that I deem it unnecessary to go into details here.

Diphtheria has prevailed through South Florida, I have been informed, more than ever before, and certainly so in Tampa, which would indicate that the reports are true. Although there has never been an extensive epidemic, we have had more cases than ever before. I have been keeping careful count for the last four months of the year, that is, during school term, and find that we have had not less than 92 cases in Tampa, West Tampa, and surrounding country—80 cases within the city limits, 5 in West Tampa, and 7 in the outside district. The largest number of cases for any one month occurred in November, when there were 26 cases; 19 for September, 24 in October, and 23 in December. All cases have been thoroughly investigated and an epidemic guarded against, by going to the patient's house, and by writing personal letters to the principal of the school attended by infected children.

The majority of physicians now treating cases of diphtheria submit release cultures for examination before discharging their patients. Most of them submit only one release culture, and I would here recommend that the physicians be compelled to secure two negative reports before allowing the patient to return to school.

In my inspection trips to the different parts of South Florida I have always made inquiry as to the prevalence of pellagra, and although the information has been meagre as to the exact number of cases, I usually find two or three, and it seems to be on the increase throughout this section. Personally, no case has come under my observation during the year. The two cases of pellagra

reported to me from Manatee County are claimed to have been imported from North Carolina.

LaGrippe prevailed in Tampa during the last three weeks of the year, being more severe among the children, and producing cases of bronco-pneumonia from which there have been several deaths.

No cases of measles have been reported during the year, and only nine cases of scarlet fever.

Under the "Public Nuisance Act" all sanitary nuisances reported to this office have been easily adjusted, the only exception being the dumping grounds at Fort Myers, which is still pending.

Every cigar factory, public building, station, court house, etc., have been well posted on matters of health, in reference to the fly-borne diseases and tuberculosis, by the fly and tuberculosis banners distributed. The literature received from headquarters has been distributed through the city, by requesting the placing of same in packages at the leading stores, and also requesting the distribution of banners on a given day by the drivers of bakery and milk wagons.

I want to call attention to the fact that our Isolation Hospital is not screened, and would recommend the screening of doors and windows in said institution.

The following is a review of health conditions in the Southwestern District for the year 1913, by counties:

DE SOTO COUNTY.

A most excellent healthy condition prevailed in DeSoto County during the year 1913. There were a few cases of typhoid fever reported from Wauchula and Arcadia. Also hookworm and pellagra were reported from this section, but only in a very small amount.

HILLSBOROUGH COUNTY.

The health conditions of Hillsborough County during the year 1913 were good, as there were no large epidemics. The principal diseases prevailing through this county were smallpox, which prevailed through the whole year excepting two months; typhoid fever, which appeared in considerable number of cases during the

early part of the year, beginning to diminish during the month of April; malaria, which prevailed through the year in small amount, but undoubtedly is disappearing from this section, as the number is much less than it used to be five or six years ago; diphtheria, coming next to typhoid in number of cases, a few cases having prevailed almost continuously through the year; lagrippe, of which an epidemic prevailed in Tampa during the month of December and in the surrounding territory; and last, scarlet fever, scattering cases of same having been reported from different sections of the county during the year.

LEE COUNTY.

During the early part of the year several cases of smallpox prevailed in this county among the negro population around Fort Myers. Hookworm and typhoid cases also appeared in small number. Taken as a whole, the health conditions were exceedingly good for the year 1913, no real epidemics of any kind prevailing.

MANATEE COUNTY.

Smallpox prevailed through this section around Palmetto during the latter part of the summer, and at Terra Ceia during the winter. A few scattering cases of diphtheria at Palmetto and Manatee were also reported. The section of Sarasota, in this county, was in very good health condition throughout the year. Typhoid fever was reported less throughout this section than in any other county in this district.

PINELLAS COUNTY

The condition of health of Pinellas County has been exceedingly good during the year 1913. A few cases of smallpox were reported from St. Petersburg, and two cases from Tarpon Springs; in these cases the patients drove to Hillsborough County to receive treatment at the Isolation Hospital of the State Board of Health. There were also reported a few cases of typhoid and malaria in St. Petersburg during the year.

POLK COUNTY.

Polk County held the second place to Hillsborough County as far as the number of cases of infectious and contagious diseases reported is concerned; but having less population and better conditions, of course, less number of cases occurred than in Hillsborough. Lakeland had a small outbreak of diphtheria just before the opening of public schools, and during the latter part of the year; a few cases of typhoid fever also occurred in this county. Hookworm has been reported from different sections of the county during the year, and also pellagra.

Respectfully submitted,

CHARLES WM. BARTLETT,
Assistant to the State Health Officer.

REPORT OF DR. C. W. D'ALEMBERTE

WESTERN DISTRICT.

Pensacola, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla. :

DEAR DOCTOR:—I beg to enclose my report covering a period from June 12th, 1913, to December 31st, 1913, together with a brief comment on the health conditions which have prevailed in my district during this period of time.

Yours very truly,

C. W. D'ALEMBERTE,
Assistant to the State Health Officer.

COMMUNICABLE DISEASES, REPORTED FROM JUNE 12TH TO DECEMBER 31ST, 1913.

Disease	No. Cases
Smallpox	17
Tuberculosis	33
Typhoid Fever	16
Diphtheria	13
Scarlet Fever	3
Measles	1
Total cases June 12, to Dec. 31st	83
Total cases smallpox reported from Jan. 1st to June 12, 1913	522

NUMBER OF FUMIGATIONS BY SANITARY PATROLMAN, FROM JUNE 12, TO DECEMBER 31, 1913.

Smallpox	17
Tuberculosis	16
Typhoid fever	3
Diphtheria	13
Scarlet fever	3
Fumigations at Isolation Hospital	3

55

STATE BOARD OF HEALTH OF FLORIDA

81

NUMBER OF DEATHS FROM COMMUNICABLE DISEASES, REPORTED FROM JUNE 12, TO DECEMBER 31, 1913.

Tuberculosis	5
Diphtheria	3
	8
Number cases smallpox sent to Isolation Hospital June 12, to December 31, 1913	3
Number cases smallpox sent to Isolation Hospital Jan. 1, to June 12, 1913--	67
Total	70
Number vaccine points furnished physicians upon request from June 12, to December 31, 1913	126
Number transit permits, Form 233 issued from June 12, to December 31, 1913	40
Number issued from Jan. 1, to June 12, 1913	39
Total for year	79

Following instructions of the State Health Officer, on July 20, 1913, accompanied by Dr. F. A. Brink, of the Pensacola laboratory, a trip was made to Holt, Fla., for the purpose of investigating the possible source of infection of typhoid fever patients. After a careful examination, we arrived at the opinion that the disease was transmitted by the house fly, and recommended the screening of closets and the disinfecting of the excreta of the typhoid patients, together with typhoid vaccination.

At the request of the State Health Officer, on August 28th, Dr. Kennedy, a member of the Board, accompanied by Dr. Brink, went to DeFuniak Springs, on August 31st, to confer with Dr. Taylor, in charge of the diphtheria epidemic, I being on my leave of absence at this time. Dr. Kennedy succeeded in having an ordinance passed regulating the reporting of all suspicious cases, and investigated cases at Marianna and Ponce de Leon.

On September 10th, at the direction of Mayor Paul Carter, of Marianna, I visited that city to investigate a case of diphtheria, and to give them some advice on the management and control of epidemic diseases. I was able to have a special meeting of the City Council pass an ordinance creating the office of City Physician, visited Mr. Dickerson, the Registrar, and found his reports to be within ten per cent. of correctness.

On December 16th, also at the direction of the State Health

Officer, I visited St. Andrews, Fla., in company with Dr. Brink, to ascertain the cause of a number of cases of amoebic dysentery. The water supply was found to be good, and the undoubted source of infection was the open surface closet and unscreened houses. Dr. Wells, the physician in charge, was advised of the cause, and he promised to take it up with the owners of the mill to have the closets screened.

SANTA ROSA COUNTY.

Dr. H. Mason Smith, Santa Rosa County, states:

"The general health conditions of Santa Rosa County have been good for the year 1913.

"There has not been an epidemic of any nature during the entire year, and the percentage of communicable diseases has been less than usual.

"There have been a few cases of malaria, all of which have been of a mild type, no malignant or hemorrhagic cases have been seen.

"Typhoid fever has appeared in different parts of the county at various times, but at no time has it spread to any extent. The people in both town and rural districts are screening their homes against flies and mosquitoes more than ever. This has been the result of the educational work of the Health Notes, and in the opinion of the medical men of the county, accounts wholly for the decrease of typhoid and malaria infection.

"A few cases of smallpox were found the first part of the year, but as the sentiment against vaccination has been broken down, enough people were vaccinated to prevent any spread.

"Only two cases of diphtheria appeared. They were sporadic in origin, our county remaining free of the epidemic."

WALTON COUNTY.

Dr. C. B. McKinnon, Walton County, states:

"This year has been extremely healthy throughout the entire county, with the exception of an epidemic of diphtheria, in the latter part of August and first of September.

"There has not, to my knowledge, been one case of typhoid fever in the county during the year.

"Five or six cases of smallpox have been reported from this county.

"I find from inquiry in the malarial districts that there has been a great reduction in the number of cases. I cannot give any reason for the reduction. Hookworm disease is prevalent throughout the county, and there does not seem to be as much effort on the part of the physicians to encourage the treatment of the disease as in the past.

"There is little objection to vaccination among the better class. There are many cases of tuberculosis reported from different parts of the county, and it appears to be on the increase. The local newspapers and Health Notes have done much to bring about better health conditions, in the homes, both in the town and in the country. Many of the homes in the country have built fly-proof privies, and this has had much to do with the decreased amount of typhoid.

"An ordinance has been passed by DeFuniak relative to the reporting of births and deaths, and they have also named the Clerk of the Council as Registrar."

JACKSON COUNTY.

Dr. Theop. West, of Jackson County, states:

"That the consensus of opinion of the physicians with whom he has conversed is that the health of Jackson County has been unusually good.

"There have been no contagious or infectious diseases in the county except a few cases of diphtheria, which yielded very promptly to treatment.

"There has been a very large number of hookworm cases, confined mostly to the rural districts.

"The sanitary conditions of Marianna and other towns and villages of the county are not as good as they should be."

WASHINGTON COUNTY.

Dr. F. C. Wilson, Washington County, states:

"The general health has been exceptionally good in Washington County during the year 1913. No epidemic of any kind has

occurred. Washington County is almost entirely free from contagious diseases. Malaria has been much less prevalent than last year, also very few cases of typhoid fever. Hookworm disease prevails in many localities."

"I find many still inclined to oppose vaccination."

CALHOUN COUNTY.

Dr. B. V. Elmore, Calhoun County, states:

"This year has been an exceptionally healthy one. In fact, we have had no epidemics of any kind. There has been only one case of typhoid fever in Blountstown, that was in 1912.

"I have treated five cases of smallpox during the year, which was all that occurred in this part of the county. I have vaccinated successfully about one hundred people. We have a considerable number of hookworm cases in this county. I would say now about thirty per cent. of the population are affected with this disease."

BAY COUNTY.

Dr. W. G. Mitchell, St. Andrews, Fla., states:

"We have not had an epidemic of any kind whatever. Some few cases of malaria, which have been readily amenable to treatment. We have had one case of diphtheria.

"We have had several cases of amoebic dysentery. Twenty-five per cent. of the inhabitants are infected with hookworms."

Dr. W. G. Lowe, Lynn Haven, Fla., states:

"There are quite a number of hookworm cases in Bay County. There have been about twelve cases of diphtheria during the past year."

ESCAMBIA COUNTY.

Since assuming charge June 12th, 1913, there have been eighty-three cases of communicable diseases, fifty-five fumigations by the Sanitary Patrolman. Number of deaths from communicable diseases, eight. The number of transit permits issued, seventy-nine; number of vaccine points furnished physicians, one hundred and twenty-six. While the number of smallpox cases sent to

the Isolation Hospital from June 12th to December 31st, 1913, were only three, as compared with the number sent from January 1st, to June 12th, prior to my assuming charge of the office, sixty-seven.

The work of the Sanitary Patrolman has been most efficient; the sanitary condition of the Isolation Hospital is greatly improved. There has been more educational work along hygienic lines in which I have been able to do my part as a member of the Public Health Commission.

Respectfully,

C. W. D'ALEMBERTE,

Assistant to the State Health Officer.

REPORT OF DR. JOSEPH Y. PORTER, JR.

SOUTH TROPIC DISTRICT.

Key West, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—I have the honor to report as follows on my work for the period that has elapsed since my appointment as an Assistant to the State Health Officer for the South Tropic District.

August 2, 1913, a reported case of yellow fever at the Louise Maloney Hospital of this city was investigated, a diagnosis of yellow fever having been made by the physician in charge of the case; the case was immediately examined, and a tentative diagnosis of malaria made, which was confirmed within the hour by finding the organism in the blood.

The "garbage dump" matter was repeatedly taken up with the City Council. This place, where all garbage from the city was deposited and burned, for quite a number of years has been a sanitary nuisance, in that it furnished an ideal place for the propagation of flies. The condition of the "pile" is now much better than formerly, and since the time that I last addressed the Council on this matter, the Council has called for bids for a thirty-ton incinerator, which will cover our needs for several years.

The screening laws of which the enforcement has been very lax in the past, are now strictly enforced, numerous violations having been prosecuted in the criminal court; likewise the various laws on sanitary nuisances, etc.

All dairies have been inspected and milk tested, both chemically and bacteriologically; with few exceptions the dairies and surroundings are in a very unsanitary condition. All cattle are tick-infested, and it was endeavored to arouse among the dairymen interest in a dipping vat and to get this island tick free. I regret to state that I have been unable to accomplish anything.

All the physicians of this city have been informed that this office will now make examinations for malaria, typhoid, diphtheria, tuberculosis and intestinal parasites. I regret to state that the examinations made are not so large as they might be.

I have also maintained for several months on the front porch of the office, which is just off the sidewalk, a fly exhibit, wherein were shown the various stages of the fly from the larvae to the full grown fly. This exhibit I am certain accomplished much in an educational way, and should the Council pass anti-fly ordinances, public opinion will be behind the enforcement of the same.

An effort is also being made to collect morbidity statistics from this community, and although all physicians have been seen personally and their help promised, and although stamped post cards supplied to make these reports, the number of cases reported is not what I hoped for, or what it should be.

However, an encouraging feature is that more cases are being reported.

In November, 1913, I had the honor to represent the State Health Officer at the fourth annual meeting of the Association for the Study and Prevention of Infant Mortality, which took place at Washington, D. C. This detail was made the subject of a special report.

I have been unable to inspect the district outside of Key West, with the exception of Long Key, as the majority of places are reached by launch only, and I have been awaiting authority to hire same.

In addition to the above, I have tried to arouse interest in the matter of our high infant mortality, especially that under two years of age, and it shall be my endeavor to have a suitable milk station established, in charge of a competent nurse this coming summer.

The work of the Sanitary Patrolman has been systematized, daily reports now being required of him; in this way more work is covered daily, than formerly.

In the last week of December, 1913, a suspicious case of chickenpox was investigated; after watching the case for two days a definite diagnosis of chickenpox was made.

I am now about to address a communication to the City Coun-

cil looking towards the passage of ordinances for screening of cisterns, fly-proofing of toilets, and the better care of stables. These measures enacted into law and rigidly enforced, will, I feel certain, show a marked reduction in our infant mortality this coming summer.

Respectfully,

JOSEPH YATES PORTER, JR.,
Assistant to the State Health Officer.

REPORT OF DR. W. P. CRIGLER

SOUTH CENTRAL DISTRICT.

Ocala, Fla., January 1, 1914.

DR. JOSEPH. Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—I have the honor to herewith hand you a report of the general health conditions existing in the Ocala District during the year, and a resume of my work. The district comprises the counties of Marion, Lake, Sumter, Citrus, Hernando, Seminole, Orange, Osceola, and Pasco.

The general health conditions of the whole district have been good. No epidemics of a serious nature occurred. Malaria, the most prevalent disease, is on the decrease, especially in the larger towns, where prophylactic measures, in the way of screening against the mosquitoes, are better carried out.

Typhoid fever exists in isolated cases throughout the district, but in no instance reaching an epidemic. Most all of the cases were of fly-borne origin. Notwithstanding the great number of open surface closets, and a great number of flies, typhoid is rare.

The communicable diseases of childhood occurred throughout the district, with measles the most predominant. Few cases of mumps, whooping cough and scarlet fever were reported, especially during the school term.

Diphtheria has caused a great deal of anxiety and has existed in a number of places throughout the district. The most virulent cases and those ending fatally, occurred in the rural districts, where an early diagnosis and prompt administration of antitoxin was not obtained. Isolated cases of diphtheria occurred where the origin of the infection was impossible to trace.

Smallpox has at no time reached the stage of an epidemic. It has existed at various points over the district, but by prompt vacci-

nation of the contacts, and all others who would accept it, the spread of the disease was prevented.

A great number of people have been vaccinated during the last two years, and that accounts for the small number of cases reported in this district during the year.

Pellagra is being diagnosed more frequently now than formerly, and cases are being seen by most of the physicians in the district. The opinion of several doctors who have treated the cases claim a relationship between this disease and that of hookworm. One physician reports good results in the treatment by the administration of thymol. It is evidently on the increase.

Epidemics of dengue fever; of a widespread nature, occurred in Sanford and Orlando during the months of August and September. The greater part of the population of these towns were affected. The cases were of a mild nature, and no fatal results were reported.

Hookworm exists as extensively as formerly, and the doctors are treating a great many cases. The greater number of cases occur in the rural districts, and are generally too poor to come to the physician for treatment.

A few cases of anterior poliomyelitis are reported.

I have made two inspection tours of my district, and visited the most important places. I also assisted in establishing the Registrar of Vital Statistics in the towns of Ocala, Sanford, Orlando and Kissimmee.

MARION COUNTY.

The health conditions as a whole have been satisfactory. Malaria is less prevalent than formerly, especially in the larger towns, due to better screening of the residences. Typhoid fever has existed, but at no time reaching an epidemic. One death from smallpox occurred in Ocala, but no other cases followed. Few cases occurred in the county during the year.

Sporadic cases of diphtheria occurred. Also, a few cases of measles, mumps, and whooping cough. Two cases of infantile paralysis are reported.

Hookworm cases exist in the county, but not a great many come to the physician for treatment.

Four cases of pellagra, with fatal terminations, came to my knowledge during the year. Complaints are made by some of the physicians of the great amount of cocaine and narcotic drugs that are being used by the negroes in the county. It can be easily obtained in a large number of places. Some better way to prevent the sale of the drugs is advocated.

CITRUS COUNTY.

No epidemics of a serious nature have existed in this county during the year. Malaria has been very persistent, and prevailed over the greater part of the year. Cases have a tendency to chronicity. A number of cases of amoebic dysentery have occurred without a known source of infection. Dr. Miller, of Inverness, reports excellent results in the treatment of the disease by hypodermic injection of emitin. No smallpox has been reported. Very few cases of typhoid fever existed. Some cases of dengue were reported. The doctors interviewed reported cases of pellagra. None of the communicable diseases of childhood were reported. Hookworm exists in the county, but the doctors are not treating a great number of cases.

HERNANDO COUNTY.

This county has been in a healthy condition and free from any epidemics. Malaria prevails, but is on the decrease. Four cases of diphtheria occurred. No typhoid, scarlet fever, or smallpox were reported. Hookworm cases are plentiful in the rural districts.

LAKE COUNTY.

The health conditions have been good during the year. The Tertian and aestivo autumnal type of malaria prevail. Diphtheria existed in the county to the extent of eight to ten cases. One case of typhoid fever occurred at Leesburg. No epidemic of the communicable diseases of childhood existed.

SUMTER COUNTY.

This county has been free from epidemics of any magnitude. Ten cases of typhoid fever occurred in and around Bushnell. The inhabitants of Webster were attacked with measles in February. Malaria prevails in the same degree as formerly, but no malignant types are reported. Hookworm cases are numerous throughout the county, but are not coming to the physicians for treatment, unless it exists in a severe form. The towns of Coleman and Wildwood had a few cases of diphtheria during the fall and winter. No smallpox is reported.

SEMINOLE COUNTY.

A widespread epidemic of dengue fever visited Sanford during August and September. A large number of cases occurred. No fatal results were reported. Twenty-eight cases of smallpox occurred in Sanford during the year. Malaria is on the decrease, especially in the larger towns. Three or four cases of typhoid and a few cases of diphtheria existed.

ORANGE COUNTY.

Malaria is decreasing in this county. Few cases of typhoid occurred, but at no time reaching an epidemic. No smallpox, owing to the great number of vaccinations two years ago. A widespread epidemic of dengue fever occurred in Orlando during the fall, affecting the greater part of the inhabitants. Mumps, measles, and whooping cough existed during the winter. Two cases of diphtheria were reported.

OSCEOLA COUNTY.

The county has been free from any serious outbreak of diseases. Little malaria occurred here, and only a few cases of typhoid fever. Two cases of smallpox occurred in Kissimmee during the year. Chickenpox and a few cases of measles were reported. The hookworm conditions are bad, especially around Bassinger,

forty miles from Kissimmee. All the children in this section are victims of this disease, and are in such a poor financial condition as not to be able to obtain treatment. A free dispensary in this section would do a lot of good. Two cases of pellagra were reported.

PASCO COUNTY.

This county has been free from any epidemics of any kind, and the general health conditions are good. Little malaria exists, and only a few cases of typhoid. Two cases of diphtheria, and some cases of scarlet fever were reported from Dade City. Smallpox existed in a turpentine camp ten miles from Trilby. Diphtheria occurred at Trilby in the fall.

Respectfully submitted,

W. P. CRIGLER,

Assistant to the State Health Officer.

REPORT OF DR. J. E. TAYLOR

WEST CENTRAL DISTRICT

Jacksonville, Fla., December 31, 1913.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—I beg to append hereto my report for the half year I have been with the Board.

From the 1st to the 15th of July I was in the central laboratory in Jacksonville. This laboratory work proved of the greatest value to me, as, in addition to becoming somewhat familiar with the workings and policy of the Board, it enabled me to place before the physicians and public generally the extreme value of our laboratories and the high class of work done in them.

From July 15th, at which time I was ordered to Tallahassee to take charge as Assistant to the State Health Officer of the Tallahassee Sanitary District, until August 25, I remained in Tallahassee (headquarters for my district), becoming acquainted with the physicians and conditions of that vicinity. On August 26th I started on the quarterly visit over my district, but on the same day was ordered by telegram to DeFuniak Springs to assist in handling an epidemic of diphtheria at that place. A report of the DeFuniak Springs detail is hereto attached and made a part of this report. On September 20th I returned to Tallahassee, where I remained until September 24th, on which day I left for Apalachicola in connection with vital statistics and sanitary work in that city. I returned to headquarters on September 26th and remained there until September 29th, when I was called to Hosford in connection with scarlet fever. A report of this detail is hereto attached. I returned to headquarters on October 1st and remained there until October 3rd, when I visited Quincy in connection with vital statistics. From October 8th to October 20th was spent in the quarterly visit over

my district. A report of the sanitary conditions and health of the various communities covered on this visit is attached. From October 20th to November 6th was spent in my office in Tallahassee. On November 6th I visited Quincy in connection with an alleged sanitary nuisance. November 7th to 11th was spent in Tallahassee. November 11th I left for Jacksonville to take the examination for license to practice medicine in the State of Florida, returning on November 14th. From November 14th to December 2nd, at headquarters. On December 2nd I visited Quincy in connection with vital statistics. December 3rd to 10th was spent in Apalachicola in connection with sanitary improvements in that city. While on this visit I addressed the City Council on the necessity of some method of controlling flies. The Council complimented this address by passing an ordinance requiring that all privies be made fly-proof, and suggested its willingness to carry out any plan I might have towards improving sanitary conditions. With this active co-operation, I feel that some telling work can be done there during the ensuing year. From December 12th to 31st I was on duty in the Executive Office, Jacksonville.

In conclusion, I wish to express my appreciation of the manner in which the Executive Office and laboratories have seconded all my efforts. To this co-operation is due, in no small part, all the success that has attended my work.

Respectfully submitted,

J. E. TAYLOR,

Assistant to the State Health Officer.

SUMMARY OF WORK AND DETAILS FROM JULY 1ST TO DECEMBER 31ST, 1913. J. E. TAYLOR, M. D., ASSISTANT TO THE STATE HEALTH OFFICER.

Date and Place	Occupation
July 1-15—Jacksonville	Work in laboratory
July 15-Aug. 25—Tallahassee (headquarters)	Office
August 25—Monticello	Quarterly visit
Aug. 26-Sept. 20—DeFuniak Springs	Diphtheria*
September 20-24—Tallahassee	Office
September 24-26—Apalachicola	Vital statistics and sanitation
September 27-29—Tallahassee	Office
Sept. 29-Oct. 1—Hosford	Scarlet fever*
October 1-3—Tallahassee	Office
October 3—Quincy	Vital statistics
October 4-8—Tallahassee	Office

October 8-20—Traveling	-----	Quarterly visit*
Oct. 20-Nov. 6—Tallahassee	-----	Office
November 6—Quincy	-----	Sanitary nuisance
November 7-11—Tallahassee	-----	Office
November 11-14—Jacksonville	-----	Examination for license
Nov. 14-Dec. 2—Tallahassee	-----	Office (Diphtheria in college)
December 2-3—Quincy	-----	Vital statistics
December 3-10—Apalachicola	-----	Sanitation
December 11—Tallahassee	-----	Office
December 12-31—Jacksonville	-----	Duty Executive Office

*Detailed report attached.

REPORT OF AN EPIDEMIC OF DIPHTHERIA AT DEFUNIAK SPRINGS.

J. E. TAYLOR, M. D., ASSISTANT TO THE STATE HEALTH OFFICER.

Tallahassee, Fla., September 24, 1913.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—In compliance with telegram which reached me in Monticello, I immediately left for DeFuniak Springs, arriving there the afternoon of August 26th.

Immediately upon my arrival, and before the clinical diagnosis of diphtheria had been confirmed by laboratory report on specimens submitted, I suggested to the Mayor that a special meeting of the Town Council be called in order that such steps might be taken as were deemed necessary for the control of the epidemic. This meeting was called at 9 o'clock in the morning of the 27th. All the resident physicians were present at this meeting, but there was some difference of opinion as to the diagnosis. All, however, agreed that the disease was epidemical in nature, and that steps should be taken to limit its spread. Along this line, and at the suggestion of the physicians, the Council passed an ordinance isolating all cases of sore throat with membrane, and creating a Board of Expert Inspectors. The duty of this Board was practically that of a City Board of Health. This board was composed of myself and Drs. McKinnon and Simmons.

As the disease was spread in practically all parts of the city, and as no one knew who had been exposed and who had not, the Council also required in this ordinance that all public drinking cups,

soda-fountain glasses, cups, spoons, etc., be immersed in a solution of bichloride of mercury before re-using.

At the suggestion of the Board of Expert Inspectors, the moving picture theatre closed, and all gatherings, such as Sunday School, etc., were discontinued.

As to the source of the epidemic, I was able to gather the following facts: On or about August 15th, a child of a Mr. Beville was taken ill with what was diagnosed tonsillitis. No laboratory examination was requested. The child died about August 21st. The father of the child is a traveling man, and covers quite a large territory. As to whether the dairyman reported positive by the Pensacola laboratory is responsible for a part of the epidemic: About a month prior to the beginning of the epidemic, this dairyman made a visit North. A rumor, which he denies, states that he had a severe sore throat upon his return. Some twenty of the cases used milk from this dairy; however, the Beville child did not. Of the twenty cases using milk from this dairy, some were exposed to the Beville child and some not. Ice cream made of milk furnished by this dairy was eaten at Freeport, a town twenty miles away. One case developed in Freeport on Monday following the eating of this ice cream on Friday night. Two visitors from Pensacola ate of this ice cream, and subsequently developed diphtheria. The case at Freeport denies any other exposure whatever. About three weeks after the beginning of the epidemic, the sister of this dairyman developed diphtheria. She resides with the dairyman, and had not been away from home for six weeks.

The mortality was low, only three deaths being reported during the epidemic, and one about two weeks after I left. One of these deaths occurred before the administration of antitoxin. The next two were cases that had developed five and seven days before the administration of antitoxin. The first death evidently was due to toxemia; however, this death took place prior to my arrival. The second was due to toxemia, and the third and fourth to acute nephritis. It is interesting to note that the fourth case of nephritis, with subsequent death, developed three weeks after the case had been dismissed.

Fifty-nine cases in DeFuniak Springs and four in the nearby country were reported. Of these, twelve were very serious (four of which died), sixteen moderately severe, and the remainder light.

Of the cases in DeFuniak Springs, laboratory diagnosis was obtained on twenty-four. Of the other four cases, laboratory diagnosis was obtained on three. As gargles and mouth-washes of all descriptions had been used, and as specimens from many were not forwarded, the symptom-complex being classical, I believe that all were diphtheria. The ratio of children to adults was about 6 to 1.

Antitoxin was administered immediately upon diagnosis in doses of five-thousand units to children and ten-thousand to adults. If the symptoms had not materially improved in twenty-four hours, the original dose was doubled. In addition to the antitoxin, soothing gargles were prescribed. These gargles contributed much to the comfort of the patient, as well as lessening, to some extent, the danger of infecting others. As no one knew whether he had been exposed or not, the physicians took the stand that, if there was any question at all, the individual should receive an immunizing dose. It was our experience that an immunizing dose of one-thousand units is decidedly safer than of five hundred.

Yours very truly,

J. E. TAYLOR,

Assistant to the State Health Officer.

REPORT OF SANITARY CONDITIONS OF WEST CENTRAL SANITARY DISTRICT.

J. E. Taylor, Assistant to the State Health Officer.

TALLAHASSEE AND LEON COUNTY.

Malaria less than in several years. No homeglobinuric fever. No smallpox. Community well vaccinated. Hookworm worked by Dr. Diggett two years ago. Three cases diphtheria during the latter part of September and October. Ten cases diphtheria from the middle of October to middle of December in the Florida State College for Women. No other exanthemata. Very little typhoid in the county.

Sewage disposal of Tallahassee by septic tanks. Water supply from deep wells.

Sanitary conditions of Tallahassee fair. Health of community good.

MONTICELLO AND JEFFERSON COUNTY.

Malaria "less than in twenty years." No smallpox. Community fairly well vaccinated. Hookworm situation fair. No exanthemata. No typhoid.

Sewage disposal of Monticello generally by surface privies. Water supply from wells.

Sanitary conditions of Monticello can be improved. Health of community exceptionally good.

Doctors interviewed: Glover, McEachern and Mixon.

MADISON AND MADISON COUNTY.

Malaria about as usual. No exanthemata. Well vaccinated. Hookworm situation could be better. No typhoid. Several cases pellagra.

Sewage disposal in business section by flushing toilets, generally by surface privies. Water supply from wells.

Sanitary conditions fair. Health of community good.

Doctors interviewed: Yates, Davis and Ruter.

PERRY AND TAYLOR COUNTY.

Malaria less than usual. No exanthemata. Poorly vaccinated. Hookworm situation very bad. No typhoid.

Sewage disposal by flushing toilets and surface privies. Water supply from wells. Sanitary conditions of Perry good. Health of community fair.

Doctors interviewed: Weeks, Culpepper, Tyson and Collins.

QUINCY AND GADSDEN COUNTY.

Malaria less than usual. Two cases diphtheria during fall. No other exanthemata. No typhoid. Hookworm situation fair. Well vaccinated.

Sewage disposal: The city has a system of sewers, but on account of a defect in its charter cannot enforce the ordinance re-

quiring sanitary water closets. This will probably be remedied soon. Water supply from wells.

Sanitary conditions of Quincy are bad. Health of community fair.

Doctors interviewed: Davis, Godard, Whittle and Mack.

HOSFORD AND LIBERTY COUNTY.

Considerable malaria. One case of scarlet fever the latter part of September. No other exanthemata. Poorly vaccinated. Hookworm condition very bad. Considerable typhoid during the year. Approximately one hundred cases pellagra in the county.

Sewage disposal by surface privies. Water from shallow wells.

Sanitary conditions of Hosford very poor. Health of community bad.

Doctors interviewed: Tatom and Rhoden.

APALACHICOLA AND FRANKLIN COUNTY.

Malaria somewhat less than usual at this season of the year. No exanthemata. Fairly well vaccinated. No typhoid. Hookworm situation fair.

Sewage disposal largely surface privies. Water supply from wells.

Sanitary conditions of Apalachicola poor, but I feel that during the coming year conditions will be greatly bettered. Along this line, at the last meeting of the City Council, an ordinance was passed requiring that all surface privies be made fly-proof. Health of community fair.

Doctors interviewed: Ferris, Weems and Murrow.

In conclusion, the health generally in my district is good. Outside of Liberty County, I found very little typhoid for the year. There is more or less pellagra over the entire district. The people are not as well vaccinated as they should be. Hookworm disease will receive a considerable portion of my time during the coming year, as this situation can be materially improved.

Yours truly, J. E. TAYLOR,
Assistant to the State Health Officer.

REPORT OF DETAIL TO HOSFORD—SCARLET FEVER.

J. E. TAYLOR, ASSISTANT TO THE STATE HEALTH OFFICER.
TELEGRAM

Greensboro, Fla., Sept. 29th, 1913.

Health Officer,
Care Dr. Fred Moor,
Tallahassee, Fla.

Scarlet fever reported at Hosford. Citizens here ask investigation and protection.
JAS A. DEZELL, Mayor.

TELEGRAM

Tallahassee, Fla., Sept. 9th, 1913.

Dr. Jos. Y. Porter,
State Health Officer,
Jacksonville, Fla.

Scarlet fever reported Hosford. Leaving on afternoon train to investigate.
J. E. TAYLOR.

Dr. Jos. Y. Porter,
State Health Officer,
Jacksonville, Fla.

Tallahassee, Fla., Oct. 1, 1913.

Dear Doctor:—As per my wire to you of the 29th ultimo, I went to Hosford to investigate the reported epidemic of scarlet fever at that point.

I found only one case of scarlet fever, and the fact that the child began feeling badly in school alarmed the people to such an extent that many left town.

Isolation had been inaugurated before I reached Hosford, and as yesterday was the sixth day since the child was taken ill I expect no further trouble. The family of the child are well to do people, and are assisting the physician in every possible way.

After investigation, I wrote the Mayor of Greensboro advising him of the situation.

Yours very truly,

J. E. TAYLOR,
Asst. to State Health Officer.
Greensboro, Fla., Oct. 2, 1913.

Dr. J. E. Taylor, Tallahassee, Fla.

Dear Sir:—I have just received your letter of the 30th ult. and note contents regarding the case of scarlet fever at Hosford. At the time of wiring to you the report had just reached here and it was reported that the people of Hosford were leaving there and probably some coming here, and the few that heard it were frightened and came to me asking that we quarantine, but I had a talk over the phone with Dr. Godard at Quincy, and he advised me to communicate with you, hence the wire. Dr. Gardner was away at the time, up in Georgia, so we could not confer with him. Had he been here, he could probably have quieted the excitement without further to do.

I wish to thank you for your prompt action. It certainly leaves the impression that we are in no danger of neglect.

Yours very truly,

JAS. A. DEZELL, *Mayor.*

PLANS FOR THE ENSUING YEAR.

WEST CENTRAL DISTRICT.

J. E. TAYLOR, ASSISTANT TO THE STATE HEALTH OFFICER.

It is my intention to use every effort to improve the sanitary conditions of the larger towns. I want to do this for their own benefit, but at the same time, it will set an example for the rural districts.

The campaign against hookworm infection will be actively pursued, and as I do not believe the tremendous economic importance of this disease is as fully appreciated by the laity as it should be, considerable time will be devoted to talks to schools, clubs, etc., on this subject.

An epidemic of malaria in any section of my district will receive the closest possible attention. In this connection, screening against flies and mosquitoes will be urged at all times.

Realizing the great value of vital statistics, sufficient time will be given this work to insure accurate compliance with the plans of the Executive Office.

As vaccination furnishes such a safe, easy and sure insurance against the ravages of smallpox, I shall, at all times, present it to the people of my district.

REPORT OF DR. M. E. HECK

EAST COAST DISTRICT.

St. Augustine, Fla., December 31, 1913.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—As assistant to the State Health Officer, I respectfully submit my report as Medical Officer and Sanitary Agent of the State Board of Health for the East Coast Sanitary District, for the six months I have been with the Board.

On July 2, 1913, I entered upon my duties with the State Board of Health, and from this date until November 3rd, 1913, I was employed, for the greater part of the time, in the laboratory at Jacksonville.

On July 15th I was requested to investigate alleged cases of smallpox at Pablo Beach. On my arrival there I found three cases in a colored family of five persons, the two unaffected persons having been vaccinated two or three years ago.

A case of smallpox on Davis street, beyond the city limits of Jacksonville, was reported on July 18th, and on that date, after seeing the case, I had the patient transferred to the State Isolation Hospital.

On July 28th, I investigated smallpox on King's Road, about six miles beyond Jacksonville city limits. Thirteen cases had broken out in two colored families, only three members of one family escaping, and these I vaccinated. All members of the other family either had the disease at the time of my visit, or had only recently recovered from it. There were no other houses near, so I placarded the two houses, and did not remove the patients to the Isolation Hospital.

August 9th, I was sent to Sebastian, St. Lucie County, to investigate alleged unsanitary conditions due to impure water from the Fellsmere drainage canal emptying into Indian River.

While on this trip to Sebastian I visited Roseland, a village some two miles away, for the purpose of investigating an epidemic of malaria. This epidemic evidently started from an imported case, thus demonstrating again that the *Anopheles* must be infected before they are a menace to the public. Screening and bars were urged on the people as the proper method of prevention.

On August 16th I visited St. Augustine, where I called on the Mayor, the various physicians, and the City Health Officer, Dr. A. W. Underwood, in an effort to arouse greater interest in the subject of vital statistics.

St. Augustine has an ordinance requiring the reporting of all births and deaths to the City Health Officer. The ordinance provides further that the City Health Officer shall make reports monthly to the State Board of Health in accordance with rules of said Board. There is no penalty clause attached to this ordinance, but I feel that from this time forward returns for St. Augustine will be sent in promptly.

August 18th, I went to Palatka, where I interviewed the physicians, and several members of the City Council. Here I noticed some indifference on the part of some physicians and Councilmen, but when I explained the value and necessity of correct vital statistics, their interest was considerably aroused. Both the President of the Council and the Chairman of the Ordinance Committee promised to bring the matter up at the next meeting of the Palatka Council. As a result, an ordinance was passed and, though it is not an ideal ordinance, it is a step in the right direction.

August 20th, I went from Palatka to DeLand, where I called on the Mayor and the various physicians. Here I found conditions most gratifying. The city has an adequate ordinance for the reporting of vital statistics, and I believe the Registrar is doing all in his power to enforce it.

August 22nd, I went from DeLand to Daytona. Here I called on city officials and physicians, as in the other cities. Daytona had an ordinance, but it was not being enforced. By it all physicians and midwives, or others, were required to report all births and deaths to the City Physician. Many physicians were neglecting this, and the City Physician himself had failed to report the vital statistics of the city to the State Board of Health.

August 27th, I was sent out near Highway Avenue, beyond the city limits of Jacksonville, to inspect a slaughter pen belonging to a Mr. Graddick. The building was constructed of rough boards, set about one or two inches apart, for the passage of light and air. It consisted of two rooms and an outer shed, and outside it was surrounded by pools of foul smelling mud, formed by blood and drainage water from the pen. Pigs were running at large, and these mud puddles formed a wallowing place for them.

The insides of the building were coated with blood and grease, the rafters were hung with cobwebs, and the floors were dirty. Flies of the blue and also the common house variety swarmed in the building and alighted on the meat, that was hung up after killing and dressing the animals. No screening was provided, and when the meat was put in wagons for conveyance to Jacksonville, it was dumped in the wagon box, and no covering was placed on top. Men working around the slaughter house frequently spit on the floor.

On September 6th, I inspected a slaughter house several miles outside of Jacksonville city limits belonging to Mr. H. L. Lane, R. F. D. No. 1. This was in about as bad condition as Mr. Graddick's place, but at the time of my visit he was having a new pen constructed, which he promised would be clean and sanitary.

On this same day I inspected also a slaughter pen on F. J. Melson's farm, conducted by Mr. J. F. Means. This one was not quite as bad as the other two, but it was far from ideal. Many flies were to be seen, there was no screening, and the boards were about as far apart as on the pen of Mr. Graddick. The building was not so old, and there was not so much mud surrounding it, but there was considerable odor from piles of bones and horns near the building.

On October 3rd, I was called to Pablo Beach to investigate alleged cases of scarlet fever. There were two cases, which proved to be chickenpox.

October 17th, I investigated several cases of smallpox, in a colored family in the woods near South Jacksonville. The patients refused to go to the isolation hospital, so I placarded the house. Next day one of these cases died.

The same day I investigated a case of possible hydrophobia

in a dog out near the Moncrief race track in Jacksonville. One person had been bitten, but the dog did not prove to be infected.

October 27th, smallpox was reported in South Jacksonville, so I went there that afternoon to investigate. I found two cases, two white men, one in South Jacksonville, and the other out near Phillips postoffice, on the St. Augustine road. In each case all other members of the family had been vaccinated, so I placarded the houses.

October 29th I was detailed to investigate smallpox in this section. I spent October 29th, 30th, 31st and November 1st, and part of November 3rd, on this detail. During this period I made several trips to South Jacksonville, Phillips, Spring Glen, and the country surrounding South Jacksonville.

The cases I saw on October 17th in the colored family by the name of Gibson had all recovered, excepting the wife of the man who had died. I sent her to the isolation hospital, together with a small boy in a neighboring colored family. I was unable to find any more cases of smallpox, though I found a number of colored people who had had the disease in the past few months.

During this investigation I visited the South Jacksonville schools and arranged to vaccinate the school children. I was assisted in this work by Mr. Henry Brown, and together we vaccinated over one hundred children, and several of the teachers. No new cases were reported, excepting in the family of Mr. Crozier, one of the white cases reported October 27th.

November 3rd, I transferred my headquarters to St. Augustine, where I spent the greater part of that month.

November 13th, I was requested to go to Palatka to explain to the Registrar of Vital Statistics a few points on the subject of vital statistics. While in Palatka I made calls on the various physicians, returning that evening to headquarters.

November 19th, I went to Daytona, saw members of City Council and the City Clerk, and recommended changes in their ordinance for collection of vital statistics. This ordinance has recently passed, and it will become effective January 24th, 1914. The City Clerk will act as Registrar for Daytona.

November 21st, 22nd, and 24th, I was on a detail to Phoenix Park, near Jacksonville, investigating smallpox. No active cases

could be found. On this visit I went to Cummer's Mill, and also to the public school, and vaccinated in all, about 120 persons, both white and colored.

From December 2nd to December 4th, I was detailed again to go to Phoenix Park, near Jacksonville. On this visit I found one case of smallpox, a white patient, under the care of Dr. Carswell. This patient was removed to the isolation hospital.

During this period I was also detailed to investigate sewage and closets at the Lincoln School, beyond city limits of the Highway section. There was no sewer system, and the surface closets were in a most filthy and unsanitary condition. No attempt was made at screening or in other manner excluding the flies. I reported also a filthy surface closet in the yard next to the school house. This house belongs to Mr. W. C. Warrington, and I called on him and requested him to provide a proper closet. December 9th I was requested to report at the Executive Office. On my arrival there I was again detailed to investigate some reported cases of smallpox out beyond Phillips Postoffice, on the St. Augustine road. I found one case, a colored man, whom I removed to the isolation hospital. I vaccinated five members of the family who had not had the disease.

On December 14th, I left for Seville, Volusia County, to investigate alleged cases of diphtheria. When I arrived there I was told of three families where there had been cases of sore throat. Two of these cases had been seen by Dr. Welsh, of Palatka, who had made a diagnosis of diphtheria. A gargle was prescribed, but no antitoxin was administered, neither were swabs taken from the throats. At the time of my visit all the cases had practically recovered from their acute symptoms, and on examination of their throats no membranes were discovered. However, I took swabs of all who had had sore throat, as well as several other persons in the same families. These I forwarded to the laboratory of the State Board of Health, and one proved to be positive diphtheria. This was the swab from one of the cases treated by Dr. Welsh.

The schools in this section had been closed until after the Christmas holidays. I advised that all persons having sore throat see that swabs be sent to the laboratory, and that wherever cases of diphtheria occur, that all cases be kept isolated, and other children in the family be kept out of school.

December 15th I returned to Palatka, where I interviewed Dr. E. W. Warren and other physicians as to the general sanitary conditions and the number of communicable diseases in Putnam County.

December 16th, I went to Green Cove Springs, where I called on Dr. L. C. Fisher, former county agent of the State Board of Health for Clay County. I called, also, on the other physicians, and on the editor of the local newspaper.

From Green Cove Springs I went to Jacksonville, and thence to St. Augustine on December 17th.

December 18th, I left on my final trip for the year, returning to St. Augustine on the evening of December 23rd. During this period I visited West Palm Beach, Fort Pierce, Cocoa, Daytona, and DeLand. At these cities I called on the various physicians, city officials, newspaper editors and others in an effort to obtain a fair idea as to the number of cases of various diseases in the counties of my district. No accurate figures are obtainable as to the number of cases of communicable disease, but the reports I did obtain will serve to show the relative frequency of each.

Following is a brief report of the prevalence of diseases for each county in my district:

DUVAL COUNTY.

The sanitary inspections outside of the city of Jacksonville, are made by the State Board of Health. During the year a general inspection of slaughter houses on the outskirts of Jacksonville was made, and these have since been put in a more sanitary condition. Smallpox prevailed in the early and fall months in Milldale and South Jacksonville, and in November and December in Phillips and vicinity, where two deaths occurred from this disease. A vaccination crusade was carried on in these places, about one thousand vaccinations being made during the year. Baldwin reported a case of smallpox during the spring.

CLAY COUNTY.

Nine cases of typhoid fever, one death; three cases of diphtheria, one death; two cases of scarlet fever; forty to fifty cases of

smallpox among colored people. Of malaria and dengue fever, no record was kept. Dr. Fisher, former County Agent, stated that there were a number of cases of dengue, and about the usual number of cases of malaria. There are a few cases of tuberculosis.

Sanitary conditions in Green Cove Springs and surrounding country are fairly good.

ST. JOHNS COUNTY.

From the report of Dr. A. W. Underwood, former county agent and present City Health Officer for St. Augustine, St. Johns County is shown to have been particularly free from any serious outbreaks of communicable diseases.

During the early spring months there were a number of cases of smallpox, confined principally to the colored race, and most of which contracted the disease elsewhere and were brought to St. Augustine for treatment; this city being the headquarters of the medical department of the Flagler System. Four cases of diphtheria have been reported, with one death. There have been three cases of scarlet fever reported. Malaria has not prevailed to any great extent, nor have there been but few cases of typhoid fever. During the fall and early winter months there have been a large number of cases of dengue fever. One case of pellagra has been reported by Dr. Webb, of St. Augustine, but this case developed elsewhere, and came here for treatment.

Dr. Underwood reports that sanitary improvement has kept pace with the general development of the county.

PUTNAM COUNTY.

From information secured from Former County Agent Dr. E. W. Warren, and other sources, Putnam County has an exceptionally good record.

There was a moderate wave of dengue fever throughout the county during the fall months, but malaria has shown a marked decrease compared with previous years. But few cases of smallpox were reported, and these were of a mild type, occurring among the

colored people, with whom the usual prejudice exists in regard to vaccination.

Cases of diphtheria have not been accurately reported, and it is to the negligence of some of the physicians that this condition is due. It is highly probable that many mild cases were never reported, as swabs were not always taken of patients suffering from sore throats of a suspicious character.

VOLUSIA COUNTY.

My report for Volusia County is based principally upon information furnished by former county agents, Dr. John McDiarmid, of DeLand, and Dr. G. A. Klock, of Daytona, also from Dr. Roy Howe, City Physician of Daytona.

Two cases of smallpox were reported, with no deaths, ten cases of typhoid, principally from Daytona and vicinity, and two or three cases of diphtheria. Diphtheria reports have probably been inaccurate, as this does not include the two cases reported from Seville.

There was one case of measles and one case of cerebro-spinal meningitis. Ten cases of pellagra were reported, with two deaths. Tuberculosis is present to a certain extent, but is confined principally to the colored race, and the poorer classes of white people. No record has been kept of malaria, but the number of cases has been small. As in all other counties of my district, little notice is taken of uncinariasis, though this disease is widely prevalent among the country residents.

BREVARD COUNTY.

My report for Brevard County is based almost entirely upon information secured from Dr. W. L. Hughlett, of Cocoa. He reports one case of smallpox, which he thinks was the only case occurring in the county during the past year.

Tuberculosis is present more or less continuously, and Dr. Hughlett reports twelve cases in his practice during the year 1913.

There were three cases of mild scarlet fever, with no deaths, and one imported case of anterior poliomyelitis.

A great many cases of dengue occurred, with no deaths. Dr. Hughlett had about fifty cases in his practice alone. No cases of diphtheria reported.

ST LUCIE COUNTY.

Dr. W. E. Van Landingham, former county agent, and other physicians report the following for St. Lucie County:

Four cases of smallpox, with no deaths; three cases of typhoid fever, and twenty-seven cases of tuberculosis. No record was kept of measles, but a rough estimate places the number at forty or fifty cases.

A number of cases of pertussis occurred during the year, and during the fall months, quite a number of cases of dengue fever.

PALM BEACH COUNTY.

My report for this county, while approximate, is probably more accurate than any of the others, as I interviewed more physicians than in some of the other counties.

The following diseases have occurred during the year 1913: Smallpox, two cases; typhoid fever, eleven cases, one death; diphtheria, none reported; scarlet fever, four or five cases; dengue fever, a general epidemic throughout the county; malaria, a few cases; pertussis, many cases, one death; tuberculosis, no record kept, but a few cases are present each year; measles, a few cases; pellagra, no cases reported; and one case of glanders of many months' standing, which seems to be improving.

From the above, it would seem that with the exception of the eleven cases of typhoid fever, Palm Beach County has an exceptionally good bill of health. All of these cases occurred at West Palm Beach outside the area supplied by sewers. They all occurred in the same section of town, and it is my belief that practically all were preventable, and due to open surface closets, plus flies.

The death reported from pertussis was caused by a complicating acute bronchitis.

General sanitary conditions throughout the county are reported as good, though much could be done in the way of improvement

on the construction of surface closets outside town limits and in country districts.

* * * * *

In conclusion, I wish to bring to your attention a few observations I have made during my short term of service.

Smallpox as a rule is of a mild type, and occurs more often among the colored people. This may be accounted for by the fact that the colored race as a whole are afraid to be vaccinated. The mildness of the infection has had a bad effect, in that less care is exercised in the isolation of cases.

In the cases of measles, mumps, chickenpox, and pertussis, little care is exercised, and mothers accept these diseases as incidents of childhood. Only a few cases of scarlet fever occurred in my territory, and they were not severe cases. The hardest thing in the isolation of these cases seems to be to keep the patient isolated after he feels perfectly well, but before desquamation is complete.

Malaria is looked upon as a mild illness, and many physicians are in the habit of diagnosing and treating malaria without ever taking a blood smear. Consequently the type of the disease is diagnosed by symptoms alone. I have found that in the cities where the people are alive to the importance of screening, malaria is comparatively infrequent.

The seriousness of diphtheria seems to be realized by all, but there are a few physicians in my territory who rely neither upon the microscope as an aid to diagnosis, nor upon antitoxin as a curative agent.

Pulmonary tuberculosis, like the poor, is always with us, and as the largest number of cases occur among the poorer people the need of a State sanitarium for these cases is emphasized. They have no money, they cannot work, they do not always receive proper treatment and nourishment, consequently many of them die.

In speaking of uncinariasis, I must confess I am speaking more from observation than from information given me by any physicians. Physicians told me: "Oh, yes; we treat a few cases."

If one can judge by such symptoms as anemia, poorly nourished appearance, dry hair, lack of development, a certain peculiar

puffiness around the eyes, etc., I should say there were many thousands of hookworm sufferers in my territory.

Frequently I look over groups of loafers, and children in country districts, and pick out case after case as the train stops for a few moments at some station.

Except in incorporated towns or cities where ordinances require proper surface closets, I find the most unsanitary surface closets. The idea seems to be to protect only the person from the view of passers-by. Certainly no attempt is made to hide the droppings from view or to prevent pigs or chickens from feeding upon the same. Flies also have free access both to the privies and to nearby houses. Were a State law passed requiring all persons to conform with certain clearly defined specifications in the construction of surface closets, I feel sure much would be accomplished in the way of prevention of hookworm disease, and also the various fly-borne diseases with which we have to contend.

With the beginning of the new year I propose visiting some of the country schools in my district in an effort to relieve some of the children of hookworm disease. Lectures may be given and free treatments administered, but some people must be compelled by law before they will obey the commonest rules of right living.

Trusting that the foregoing pages will give you a fair idea of conditions in my territory, and that the future will see many improvements, I am,

Respectfully yours,

MAURICE E. HECK,
Assistant to the State Health Officer.

REPORT OF DR. C. H. DOBBS

CENTRAL DISTRICT.

Gainesville, Fla., December 31, 1913.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—The following is a report of health conditions and health work in the Gainesville District (comprising Alachua, Levy, Hamilton, Suwannee, Columbia, Baker and Bradford Counties) for the period beginning July 16, and ending December 31, 1913.

After my arrival in Gainesville, July 16, it seemed that it would be profitable to spend the next two or three weeks in a hurried trip over the entire district, this trip having in view two objects: First, the interviewing of physicians, officials and editors in the various towns throughout the district; and second, a superficial survey of the sanitary conditions prevailing in the various localities. I accordingly left Gainesville on July 24th, and before my return visited the following towns: Lake Butler, Lake City, Macclenny, White Springs, Jasper, Fort White, Live Oak and O'Brien, calling upon the city officials and as many of the physicians as possible in each place, and interviewing the editors of the various papers in an effort to have our weekly press service adopted by them for regular use each week in their publications. Four newspapers in this district are using this service regularly each week, and three others are using it often—whenever their space will permit.

In compliance with a request from Mr. J. J. Hannigan, who entered a complaint against the Lake City Ice Company, their factory was inspected during my stay in Lake City. This plant was found to be in good condition, and I saw no legitimate grounds for complaint. As this complaint dealt only with the question of *macroscopic* impurities or filth in the ice, it was not deemed necessa-

ry at this time to make an examination of the water used by the plant in the manufacture of the ice. Later, however, at the request of the Atlantic Coast Line and Seaboard Air Line Railroads, in conformity with the United States Public Health Service ruling, a bacteriological examination was made of the water used by both the Lake City Ice Company and the Diamond Ice Company, of Gainesville. In each instance the "raw" water was found to be slightly contaminated, but the *distilled* water failed to show any evidence of contamination. Both plants use distilled water exclusively in the manufacture of their ice.

Returning to Gainesville August 4th, I received from Dr. J. C. Bishop reports of two cases of diphtheria there, both of which later terminated fatally. Following these cases there occurred a number of others in Gainesville, and with the exception of a few days in the latter part of August, practically the whole of August and September were spent in Gainesville in the management of this situation. We were unable to trace the source of the infection except to determine that there were at least four distinct foci of infection. (1) A case imported from South Florida; (2) one from West Florida; (3) one from Augusta, Ga., and (4) one from Clinch County, Ga. The situation was accordingly controlled by prompt isolation of patients and suspects, and by immunization of all persons who had been directly exposed to the disease.

Several cases of scarlet fever also occurred in Gainesville during this period.

One very gratifying incident, which was probably due in some degree to the occurrence of these cases of diphtheria in Gainesville, and which was certainly hastened thereby, was the creation in Gainesville of a municipal health board, with the following personnel: Dr. J. F. McKinstry, Jr., President; Dr. E. Lartigue, Messrs. H. E. Taylor, W. M. Dale and W. L. Hill. The Board elected Dr. W. Lassiter to the position of City Health Officer and Secretary of the Board. Gainesville is greatly indebted to Mr. W. L. Hill and to Doctors McKinstry and Lartigue for their earnest and untiring efforts in the organization of this health department.

During the same period (July, August and September), diphtheria was reported at Micanopy, Archer, Lake Butler and Bronson; smallpox in the vicinity of Gainesville; scarlet fever at Fort

White; and later, diphtheria near LaCrosse, at Hampton, Live Oak, Cedar Key, Meredith and Lula; scarlet fever at Live Oak; and smallpox at Starke and Dowling Park. These scattered outbreaks of smallpox have been controlled solely by vaccination. It is practically impossible to make an accurate estimate as to the number of persons vaccinated in this district during the past six months, but from the reports of the various physicians I would place the number at from four hundred to five hundred. I have personally vaccinated eighty-one persons during that time. The following table shows in convenient form the number and location of cases of contagious disease which have occurred in this district during the past six months. No record of typhoid and tuberculosis has been kept because of the very inaccurate and incomplete reports received from physicians on these two diseases.

SMALLPOX		No. Cases.		No. Deaths.	
		White.	Colored.	White.	Colored.
Gainesville vicinity	0	26	0	0	1
Dowling Park	1	0	0	0	0
Starke	3	8	0	0	0
Total	4	34	0	0	1
CHICKENPOX					
Gainesville	2	6	0	0	0
SCARLET FEVER					
Gainesville	3	0	0	0	0
Live Oak	1	0	0	0	0
Fort White	1	0	0	0	0
Total	5	0	0	0	0
DIPHTHERIA					
Gainesville	25	0	2	0	0
Micanopy	3	0	1	0	0
Near LaCrosse	0	4	0	1	1
Archer	1	0	1	0	0
Lake Butler	8	0	2	0	0
Bronson	1	0	1	0	0
Hampton	1	0	0	0	0
Live Oak	2	0	0	0	0

Cedar Key	1	0	0	0
Meredith	1	0	1	0
Lula	1	0	0	0
Total	44	4	8	1
Total number cases communicable diseases reported, exclusive of typhoid and tuberculosis				
Total number of deaths reported from communicable diseases, exclusive of typhoid and tuberculosis				

Rabies was, for a time during the past summer, rather prevalent in Starke, several animals being bitten by a rabid dog shipped there from some point in Georgia. The situation was controlled, however, by the prompt passage and rigid enforcement of a muzzling ordinance.

In November I was called to Micanopy by the occurrence there of two cases of typhoid. I visited these two cases with Dr. Howell, and was gratified to find everything in excellent condition, the patients being isolated, the rooms well screened and all due precautions being taken as to dishes, bed-clothing, disposal of feces, etc. After a thorough investigation, it seemed that the most probable source of these cases was an exceptionally filthy toilet which had been recently used by a number of turpentine hands who had been working in the vicinity but who had since left town. This privy is situated just in the rear of the residence of a Mr. Tompkins, whose wife was the first to contract the disease. The citizens of the town were a little inclined to be panic-stricken, though I tried to assure them that there was no cause for alarm. However, I took advantage of this feeling to impress upon them the necessity of a proper ordinance regulating the type of privy to be used within the town limits.

The Mayor, Mr. E. A. Hickson, called a meeting of the council and I met with them to press this point. The suggestion was favorably received and the Mayor requested me to mail him a copy of the Jacksonville ordinance, so that a similar ordinance with, of course, a few minor changes to fit local conditions, might be passed by the council of Micanopy. A committee was also appointed to inspect conditions within the town and to put everything in as good condition as possible under the present ordinance. A thorough clean-up of the town has resulted.

During the past three months a very interesting experiment has been in progress at the creosoting plant of the A. C. L. Railway near Gainesville. Last April Mr. L. E. Means, a truck farmer residing near this plant, made complaint that the waste therefrom was polluting Hogtown Creek, a small stream furnishing water to his cattle and from which he pumps water for irrigating purposes. He requested that the State Board of Health investigate the matter to determine whether this pollution of the stream was having any deleterious effect upon his cattle and vegetables. Dr. Byrd visited Gainesville at that time and after a thorough investigation it was decided that the only feasible method of arriving at a definite conclusion was an actual test of the effect upon cattle so confined that they might have access to no other water.

Conditions at that time did not permit the carrying out of this idea, but during the early part of October, Mr. W. A. Fisher, Superintendent of Timber Preservation, of the A. C. L. R. R., made arrangements to put this plan into execution. A pen was accordingly constructed enclosing four acres and so arranged that the animals therein confined should have access to no other water than that flowing down this stream. After an inspection by Dr. Dawson, State Veterinarian, three calves were purchased by the A. C. L. R. R., and confined in this pen. Three pigs belonging to Mr. Means were also confined therein.

It is not the purpose of this report to give a detailed description of the process in use at this treating plant, but, owing to certain changes since Mr. Means' complaint was made, it might be well to describe the fundamental principles of the process. The timbers to be treated are run, on trucks, into steel cylinders approximately 70 feet in length and 7 feet in diameter, which are then closed, creosote run in by gravity from an overhead tank and a high positive pressure produced in the cylinders. This pressure is maintained for about one hour, and then a vacuum produced in the cylinders. The negative pressure is maintained for about one-half hour. The waste (pump water and creosote not absorbed by the timbers) is then drawn off and discharged into the drainage ditch, fresh creosote is again run into the cylinders and the whole process repeated. This was the process in use last April when Mr. Means made his complaint. With the plant in operation at its maximum capacity under

this process the daily waste amounted to about 75,000 gallons. Since that time, however, a large tank has been constructed into which the waste is drawn and from which it is again run into the cylinders, thus using the same pump water over and over and decreasing the waste to about 15,000 gallons a day. In November still another change was introduced in the process whereby pressure and vacuum are created in the cylinders only once for each lot of timbers, instead of twice as formerly, thus further decreasing the amount of daily waste to about 7,000 gallons, or about one-tenth the volume discharged at the time Mr. Means entered his complaint.

The cattle and pigs selected for this experiment were kept confined for eight weeks and showed no ill effects whatsoever. Before releasing these animals on December 9th, they were inspected by Dr. Munsell, Assistant State Veterinarian, who stated that in his opinion the animals had not been injured in any way by the constant use of this water. As nearly as it is possible to estimate it, the average concentration of this waste, with the plant running at its maximum capacity, is about 1 : 2000. Dr. Munsell thinks that, even with no allowance for further dilution by the waters of the creek, this waste would not be injurious, but rather, that the creosote being in a solution of this strength, would actually be beneficial. This was the final conclusion in regard to the matter.

The controversy has, however, been re-opened since that time. Mr. Means now complains that two litters of pigs, born about December 1st, are afflicted with some serious nervous disorder which he attributes to the polluted water drunk by the sows before the birth of these pigs. Dr. Dawson made an inspection of these animals but I have not as yet had from him, a statement of his opinion in regard to the matter.

According to the plan recently adopted, the collection of vital statistics has been taken up by the three towns of this district of more than 2000 population, viz., Gainesville, Live Oak and Lake City. In Gainesville, this work falls under the duties of the local health board, Dr. Lassiter, City Health Officer, acting as Registrar of Vital Statistics. Very accurate reports are, I think, being returned from Gainesville.

At Live Oak and Lake City, we have been much slower in getting this work started. Mayor C. D. Blackwell, of Live Oak, is

trying to push matters as much as possible, but owing to a press of important business the council has, so far, failed to pass any ordinance requiring the report, to the Registrar, of births and deaths. Mr. Blackwell, however, assures me that he will push this matter through in the near future. Meanwhile Mr. J. S. Kincaid, who has been appointed Registrar, is returning fairly accurate reports.

Lake City has an ordinance requiring reports of births and deaths, which has heretofore never been enforced. The work there was not really started until the appointment in October of Dr. Dwight Rivers as Registrar; the City Clerk, who had previously acted in that capacity, having sent in very inaccurate reports. While the results have so far been rather unsatisfactory in both Lake City and Live Oak, still a start has been made and I feel confident that the work will soon be upon a much firmer basis.

The general sanitary conditions throughout the district are good. With the exception of a few very filthy open privies and several exceptionally insanitary slaughter pens near Live Oak, there have been few conditions which demanded mention. At least two inspection trips have been made to all towns of any importance in the district with the exception of Hampton, Jasper, High Springs, O'Brien, Newberry, Dowling Park, Wellborn and Macclenny. I have been unable to make my second visit to these towns on account of a badly infected foot which has confined me to my room for the past week. During these visits to the various towns, I have personally interviewed sixty physicians, seven editors and thirty-one municipal officials.

There is in evidence throughout the entire district a spirit of hearty and intelligent co-operation on the part of both physicians and the laity, which is indeed gratifying and which promises well for the future health of the district as a whole.

The health conditions prevailing throughout this district during 1913 have been, on the whole, good, no serious epidemics having occurred. A summary by counties follows:

ALACHUA COUNTY.

An outbreak of diphtheria in Alachua County which resulted in thirty-three cases, all told, occurred during August and Septem-

ber. Practically all of these cases were confined to Gainesville, though a few scattering cases occurred at Micanopy, Archer and near LaCrosse. A number of cases of smallpox have occurred among the negroes of the county, all, however, being in the rural districts. A few cases of chickenpox and scarlet fever have also been reported.

The occurrence of several cases of typhoid at Micanopy stimulated the Town Council to action toward the improvement of sanitary conditions there, especially in regard to the regulation of the type of privy to be used within the town limits.

The establishment in Gainesville of a City Health Department has done much toward the betterment of health and sanitary conditions there, special attention having been given to the control of communicable disease and to the condition of markets and groceries.

The sanitary conditions in the other towns of the county are the average conditions found in similar communities elsewhere. None of these towns, with the exception of Gainesville, has a sewerage system; the open privy prevails in all, though as previously stated, Micanopy has taken steps toward remedying this evil.

BAKER COUNTY.

Considering the absolute lack of any attempt at the improvement of conditions in this county, it has been singularly free from communicable disease during the past year. It is strictly a rural county, Macclenny being the only town of any importance in the county. Not a home in the entire county is provided with any sort of a sewerage system; only the crudest of sanitary (or rather insanitary) conditions prevail throughout. There are only three physicians in the county, all of whom are located at Macclenny. No communicable disease has been reported from Baker during the past six months, and the physicians assure me that typhoid is practically unknown there. The conditions are certainly ideal for its spread, and this singular freedom from it (if these statements may be relied upon) can only be attributed to the lack of an initial case from which the infection may spread, or to the incomprehensible mercy of the good Lord.

BRADFORD COUNTY.

A few cases of smallpox and diphtheria have been reported from Bradford County, most of the cases of smallpox having occurred among the negroes near Starke. The great majority of the white population of Starke have been vaccinated. Rabies was, for a time, quite prevalent in Starke, but was controlled by the passage and enforcement of a muzzling ordinance. Dr. T. D. Gunter is doing good work in Starke as Town Health Officer. The general sanitary conditions in Starke, Waldo and Lake Butler are above the average, a number of homes in Starke and Waldo being equipped with private sewerage systems.

COLUMBIA COUNTY.

The sanitary conditions throughout this county are good, though Lake City is the only town provided with a sewerage system. No communicable disease has been reported from this county during the past six months. I was especially gratified to find that the health conditions among the employees of the large lumber company at Watertown are exceptionally good. During an outbreak of smallpox in Lake City a year or so ago practically all of the white school children and many of the negroes were vaccinated, as well as many of the children of the rural schools of the county. Smallpox is, accordingly, rarely seen.

It is regrettable that Lake City has been slow in the work of collecting vital statistics, and it is to be hoped that this work will soon be taken up with renewed vigor.

HAMILTON COUNTY.

The physicians of Hamilton County have been very lax in reporting and in replying to letters of inquiry, but to the best of my knowledge there has been no occurrence of communicable disease there during the latter part of 1913.

Jasper, the county seat, has no municipal sewerage system, but a number of the homes are provided with private systems. The

general sanitary conditions throughout the county are none too good.

LEVY COUNTY

Levy, like Baker, is a rural county, Cedar Key and Bronson being the only towns of any importance. The health conditions in Cedar Key, owing to its favorable location on a small island, are far better than is usually the case in a town of this size. Typhoid, however, is prevalent throughout the remainder of the county. The open surface privy is the rule. The general sanitary conditions are those commonly found in all rural districts of this and other Southern States. No accurate reports as to typhoid have been received and, aside from a few cases of diphtheria, no communicable disease has been reported from this county.

SUWANNEE COUNTY.

One case of smallpox at Dowling Park, two of scarlet fever at Live Oak and Fort White, and two of diphtheria at Live Oak, have been reported from this county.

Live Oak is provided with a good sewerage system, and the general sanitary conditions are fair. Several low spots, within the limits of the town, which were constantly covered by water, thus breeding numerous mosquitoes, have been filled. The condition of the markets and slaughter pens has been greatly improved since an inspection of them in October.

The officials in all the towns of this county display a very commendable desire to co-operate in any way for the betterment of conditions in their respective communities.

Very respectfully yours,

C. H. DOBBS,

Assistant to the State Health Officer.

Report for period beginning July 16th, and ending December 31, 1913.

REPORT OF DR. E. W. DIGGETT

ON SPECIAL SERVICE TO SEMINOLE INDIANS.

Tallahassee, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR SIR:—I have the honor herewith to hand you my report of special detail to the Seminole Indians.

In July, last, I received a letter from Dr. W. J. Godden, medical missionary to the Seminoles, notifying me that the Indians had requested him to write the State Board of Health, asking that I be sent to the Everglades to investigate health conditions, laying special stress upon the probable prevalence of hookworm disease among them.

Four years ago, when doing hookworm work in Lee County, I visited the Glades upon two occasions, making my headquarters with Dr. Godden. On the second visit I diagnosed a case of hookworm in the family of one of the Indians. It was probably upon the strength of this diagnosis that the request was sent.

The detail suggested by you and confirmed by the President of the State Board of Health, Hon. Frank J. Fearnside, to commence October 1st, was received and accepted. Upon that date I left Tallahassee for the Everglades, stopping over in Jacksonville to pick up microscope and supplies.

Upon my arrival in Fort Myers I met Dr. Godden, and we arranged to go into the Glades together. After some delay, waiting for ox teams to arrive from the mission post, etc., we made a start. Unfortunately, when only six miles from Fort Myers, Dr. Godden was taken suddenly ill, and we were forced to return to Fort Myers, where I left him under the care of Dr. Hunter, and drove into the Glades with a team hired from a local stable. After a rather hard and uneventful drive of two days and a half, we reached the mis-

sion post and found, upon arrival, several Indians camped near the post awaiting me. These Indians immediately left for the other camps to advise their people of my arrival. In a few days we had fifty or more Indians encamped near the mission post, who quickly availed themselves of the opportunity for examination and treatment.

In each case a microscopic examination was made in addition to inspection. In this work I was most fortunate in securing the valuable assistance of one of the more intelligent of the Indians, Josie Billie, an acquaintance of my previous visit. It is most gratifying to be able to state that I received the most hearty co-operation from the Indians, and in not one single instance was my advice or treatment refused.

The social custom and mode of life of the Seminole Indian is a very interesting study, but can only be learned by constant observation. I am indebted to Dr. Godden for the valuable and interesting information given below on this subject.

Contrary to popular opinion, the Seminole has considerable knowledge of agriculture, and when the hunting season is ended, repairs to his field and grows various crops, such as corn, cane, pumpkins and sweet potatoes. When the cane is ripened it is made into syrup and sold, with other products, at the trading posts. They also raise hogs and chickens, carrying the latter with them on their hunting trips.

It was my good fortune to accompany one hunting party, and the impression made is not one to be easily forgotten. The procession was a long one. First came an ox wagon loaded down with the camping outfit, pickaninnies, chicken coops and food supplies. Next came my buckboard, with camping outfit, driven by one of the squaws, and filled to overflowing with pickaninnies. Then came the men, each carrying his rifle, and finally more squaws, one leading a pig on a leash. In this manner we trekked along across the prairie.

In camp the Indian is very hospitable, and if one has the good fortune to be invited to accompany a hunting party, he is invited to eat with them, and is made to feel perfectly at home. The food is simple, but very nourishing, and well cooked. It consists mainly of game, such as wild turkey, broiled venison, etc., with bread

baked in a frying pan, and the omnipresent sofki, a stew made of corn, meat of different kinds, and flour. The meals are served in the most primitive way, the men squatting in a circle with the sofki pot in the center, and when feeling so inclined helping themselves with a large hand-made wooden spoon, each in turn leaving the spoon for the next one. The squaws wait upon the braves, and with the pickaninnies made the second table. Meals are served at rather irregular intervals when on hunting trips, the hunters going the whole day, from sunrise until dark, without food.

The Indian depends almost entirely upon hunting for a livelihood, and when the fur market is good, gets fair prices for his pelts. Unfortunately, the white hunter has encroached upon his territory, and it is only a matter of a few years when the game will all have disappeared. Each year sees a diminution in the number of otter hides brought to the trading posts, and the alligator market is almost a thing of the past.

While with the Indians I learned of one of their superstitions concerning the skinning of animals. At the present time there is quite a demand for coon skins, and as I had seen several coons caught in the otter traps, I inquired why they did not skin the coons and sell the hides. I was answered in this way: "Think so Indian no skin coon, make him sick ojus." Upon further inquiry, I found it was not all superstition. As a matter of fact, the odor of the coon is very distasteful to the Indian, and in some instances makes them very ill, causing excessive vomiting. Before leaving the post I saw all the hunters go through a course of treatment given by the Indian doctor to prevent this vomiting. The treatment consisted of a tea made of some herbs (I could not ascertain the name) taken internally, and also rubbed over the body. After going through this rather drastic treatment one of the Indians told me: "Think so skin coon ojus now." I was very glad to see this, as it added another avenue of income to their fast disappearing resources.

Their fields and big camps, as they call them, are scattered through the Big Cypress Swamp, and in some instances are very difficult of access. They are usually situated upon high ground, a small cabbage hammock or pine island, and are very fertile. An Indian will raise a crop on one of the fields, after tremendous labor in clearing up, and will then leave it. That is the end of that field,



Josie Billie Buck in foreground.



Hookworm victims, notice beads around the necks of squaws.



One of the Indian camps. Billy Tewell camp.

as no other Indian will work it afterward. During the season of planting they gather together in clans, the husband going to the wife's family, as the line of descent passes through the female.

Contrary to popular opinion, the Seminole can and will work. It was my good fortune to see them at work, both at the mission post and on the Deep Lake Railroad, which is under construction from the Everglades on the west coast, to Deep Lake, some thirteen miles.

Upon one of my visits to the end of the line, in company with Mr. McCormack, the President of the Company, and Mr. Storter, the Superintendent of Construction, I saw a feat of strength performed by one of the Indians which increased my admiration for them as perfect specimens of physical manhood. One, Dixie by name, who had tired of waiting for the construction gang to arrive, began carrying cross ties and placing them in position. When we saw him first, he was in the act of lifting a cross tie upon his shoulder, which he accomplished, carrying it through mud and water and placing it in proper position. Our compliments upon his wonderful strength seemed to please him very much, and upon his return, he picked up two ties, one on each shoulder, and staggered off with them. The negroes of the crew stood in amazement and marvelled how he could do it, when it took three of them to carry one tie and place it. It is unnecessary to state that Mr. McCormack would not allow the Indian to continue this feat of strength.

The Indians are quick to learn what is wanted of them and go about their work in a cheerful but silent manner.

The Seminole shows considerable affection for his family. Several times, while at the Mission Post, I have seen a brave wheeling his pickaninny about in a barrow borrowed from the Missionary. When sickness visits them, they are very solicitous for the sick ones, showing considerable skill as nurses.

Their system of medicine I found very difficult to understand. They have their doctors, who are very skilled in breaking up fevers. The drugs they use are more or less secret preparations, made out of herbs and plants found in the Glades. In addition to using the herbs and plants the medicine men are very expert in the art of bleeding and resort to this method of treatment on all occasions,



Josie Billie Buck in foreground.



Hookworm victims, notice beads around the necks of squaws.



One of the Indian camps. Billy Tewell camp.

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The Indians are quick to learn what is wanted of them and go about their work in a cheerful but silent manner.

The Seminole shows considerable affection for his family. Several times, while at the Mission Post, I have seen a brave wheeling his pickaninny about in a barrow borrowed from the Missionary. When sickness visits them, they are very solicitous for the sick ones, showing considerable skill as nurses.

Their system of medicine I found very difficult to understand. They have their doctors, who are very skilled in breaking up fevers. The drugs they use are more or less secret preparations, made out of herbs and plants found in the Glades. In addition to using the herbs and plants the medicine men are very expert in the art of bleeding and resort to this method of treatment on all occasions,

using an instrument for the operation made from a cow's horn. It is a system of wet cupping, the large end of the horn being placed over the scarified area and the air exhausted through the small end. They also use long incisions over a painful area to let out the "bad blood," as they state it. Hydrotheraphy is also practiced for the reduction of fever. Their mainstay, however, is vomiting and purging, which they practice to excess.

I was called upon on two occasions to extract teeth and found, much to my surprise, several pairs of forceps in the possession of one of the Indians who, I learned, did that kind of work when asked. While upon this subject, I must state that, upon close observation, I noticed the majority of the Indians had poor teeth, probably due to absolute lack of care, and possibly also to their manner of living, and the excessive use of tobacco. This fact has some bearing on the number of cases of indigestion I was called on to treat.

Before leaving the subject of social customs, it would be interesting to mention the manners of dress. The men wear a one-piece garment in the form of a shirt, reaching, in the older men, to, and in the younger men, a few inches below, the knees. These shirts are made from a cheap cotton material of many colors, the work being done by the squaws upon sewing machines, in the use of which they are very expert. The squaws wear a two-piece garment consisting of a long skirt fastened loosely around the waist, and a cape-like waist reaching in front to about three inches above the waist line, and in the back, several inches below, coming to a point. These garments are also of many colors, but not nearly so elaborate as the men's costumes. The squaws show a decided fondness for personal adornment in the shape of beads, which they wear in great numbers around the neck. In many cases the beads weigh in the neighborhood of twenty-five pounds. As a rule, shoes are not worn, and never, so far as I could observe, by the women. In a few instances I saw the men wearing shoes or moccasins on their hunting trips.

The subject of religion among the Seminoles is one almost impossible to understand. They evidently believe in the Great Spirit, and perform their religious rites assiduously. One of their customs is that of the "fire stick," which they use upon the young

brave to test his endurance to pain and prepare him for the Happy Hunting Ground.

The Seminoles at the present time have no chief, but are ruled by a Council of Six, who meet at the annual festival, or Green Corn Dance. This Council hears differences and passes judgment on offenders. In some instances punishment is very severe, and in one authentic case the offender was sentenced to death.

At the meeting of the Council marriages are arranged, and divorces granted. I do not wish to convey the impression that all marriages are arranged by the Council, for where two young people are mutually attracted, they are allowed to marry. The males outnumber the females, which may account for the slow increase in numbers.

The annual Green Corn Dance is a season of festivity attended by all the different clans. Business and social engagements are made at this time. Space will not permit a detailed description of the mission post, but I cannot allow the opportunity to pass without saying a few words concerning the mission and the medical missionary, Dr. Godden.

The mission is located on an old Indian field—cabbage hammock—surrounded on all sides by long cypress strands, which, in the rainy season, are from three to eighteen inches deep in mud and water. It is well located, and Dr. Godden intends to take up farming on a small scale, hoping to get the Indians more interested in agricultural pursuits.

The buildings at the post consist of the mission house, store building and sheds, the latter built entirely with Indian labor. All goods sold from the store are hauled by ox teams from Fort Myers, some seventy miles. At times, during the rainy season, it will take a team from three weeks to a month to make the journey; under more favorable circumstances, it takes twelve to fourteen days. The store is not run for profit, but as an accommodation to the Indians. Here they can sell their pelts, and obtain the best price the fur market affords, the mission simply taking a few cents to cover transportation charges.

To see the Seminole trading is very amusing and instructive. When he sells his skins he insists on receiving actual cash. He then turns around and buys what he wants, paying for each article

as it is handed him. They are very exact, and seem to understand the coinage very well. The principal articles bought by the Indians are cloth of all colors, beads, pins and other fancy goods; bacon, grits, flour, coffee, sugar, lard, ammunition both for shot gun and rifle, and last, but not least, tobacco.

Dr. Godden is an Englishman of rare ability, an articulated solicitor in London, and has been admitted to the bar of Florida. He has devoted the last nine years to the social, physical and spiritual welfare of the Indians. It is his intention to take up the industrial side, as well as the spiritual and medical, and if he receives the support he merits from the Episcopal Church, as well as the support of the United States Government and the people at large, there is no doubt in my mind of his success. Knowing Dr. Godden and his work so well, I feel that I have a right to say this.

I know of no man better fitted for this work than Dr. Godden, and a man who is devoting his whole life and energies for the welfare of the needy Seminole—undergoing the hardships, and living under the most unattractive surroundings, as he is compelled to do, certainly deserves the highest commendation. I can only add, God grant that his wishes may be fulfilled and his hopes realized.

In taking up the health and medical part of my report, it is not my intention to go into details of the cases seen and treated by Dr. Godden and myself during my stay at the post, as space will not permit.

Upon careful observation I found the sanitary conditions of the camps very good under the circumstances. I took the opportunity to have a long talk with the more intelligent of the Indians, namely, Billy Konipatchie, who had some schooling in his younger days, while in the employ of Captain Hendry, of Fort Myers, and his son, Josie Billie. They seemed to understand perfectly what I was saying, and I had the satisfaction of seeing the result of my talk before leaving the post. I impressed upon them the mode of infection of the hookworm, and demonstrated how useless treatment would be if they continued their present method of disposal of excrement; advised the burning of all trash and excrement where possible, and when at their permanent camps, the establishment of latrines where the excrement could be collected and buried.

I talked to them of the danger of flies and the diseases carried

by them; told them how to destroy the garbage and prevent breeding; informed them how malaria was contracted, and demonstrated the mosquito that carried the disease, of which there are a great plenty. As they all use cheesecloth screens of double thickness, it was not necessary to dwell upon that subject. Draining surrounding ponds and swamps is impossible—as any one knows who has visited the Everglades.

Malaria is quite prevalent among the Indians, several presenting themselves for treatment during my visit. Unfortunately, Tommy Doctor, the most prominent medicine man, could not understand English very well, and consequently I was unable to impress upon him the necessity of continuing the quinine after the fever had left the patient. I tried to do this, however, through Josie Billie, and believe I succeeded to a certain extent.

I took the opportunity when talking to Josie Billie, who is a member of the Council, of pointing out how advantageous it would be if they would allow one of their young men to be educated as a physician and afterwards practice among them. In talking with Josie on this subject, I discovered that a visit from an Indian doctor was paid for in cloth, four yards for each visit. Sometimes hogs were added to this payment, but the cloth must always be forthcoming.

The title of doctor seems to be handed down from generation to generation, irrespective of special training and fitness for the position. The doctor does not confine himself to the practice of medicine, but hunts and makes his field as the other Indians do.

A very interesting case was brought to me for treatment, that of a little child three years old, who had been very ill for some months, and had been under the care of my friend, Tommy Doctor. Owing to the fact that the doctor was being treated by me for hookworm, and as the Indians will not allow their doctor to treat them if he, the doctor, is under treatment by another doctor, the child was brought to me. The case was very interesting—evidently epidemic infantile paralysis. The subsequent history is rather interesting. After being under my care for two weeks or more, the Indian doctor was called again, but finally gave up the case as hopeless, and departed on a hunt, leaving the child in the care of Josie Billie. I was told that the child was very much worse, and

asking if I could be of any assistance, was told by Josie Billie, "No, Indian doctor savvy ojus, white doctor he no savvy, think so pickaninny sick ojus, think so big sleep." Upon inquiring what Tommy Doctor's diagnosis was, I was told this legend: "Tommy Doctor he say long time ago when Indian and white man fight, they kill each other ojus, then split each other open, and this make Indian sick ojus now. Think so that is trouble with pickaninny now. No give any more medicine."

The next day this child died, and was buried according to their customs. I am indebted to Dr. Godden for the following information concerning the burial customs of the Seminoles:

Upon the death of an individual, the body is carried a few hundred yards from the camp, and there prepared for burial. After the preparations are completed, the funeral procession forms, being led by the nearest relative of the deceased, and followed by most of the relations on the mother's side. This procession follows the corpse, which is carried to some place in the cypress, laid on top of the ground, and a cairn of logs built over it. The grave receives attention for about three months, and then the fires are allowed to burn up the remains.

It was quite evident upon my arrival at the post that the object of my visit was the investigation and treatment of hookworm. Upon the arrival of the Indians they would immediately be brought to me, by one who had received treatment, when specimen outfits with full instructions would be distributed. It is very gratifying to note that not in one single instance did they fail to return the outfit after following my instructions to the letter; in fact, they exhibited a wonderful amount of intelligence, far ahead in many ways of that shown by seemingly intelligent white people.

By following this method I was able to gather, examine and treat in the neighborhood of ninety cases. All microscopic examinations for the ova of the hookworm were positive with one single exception, that of a child about nine months old. Ninety-nine per cent. is a rather appalling average, yet it can readily be accounted for by the absence almost entirely of shoes, and the manner of living.

I had a little difficulty at first, in administering the capsules to the young children, the first case being especially difficult, but after



Road through cypress swamp to Mission post.



1, Billy Konipatchie; 2, Josie Billie; 3, Nillie Tiger; 4, Billy Homespun; 5, Charlie Cypress.

a lot of persuasion on my part and on the part of parents and bystanders, we finally succeeded. After this, we had no further trouble.

When examining the specimens from the adults, I made it a point to demonstrate personally to each the ova. It was quite interesting to see the expression upon the face of the one most interested, usually a smile and a shrug of the shoulders.

The Indian shows very few physical signs of hookworm disease; in fact, the only signs were among the young children, who showed the typical protruding abdomen, and slight oedema in some advanced cases. The adult seems to have developed a relative immunity to the disease, for in no way do they show the results. As a matter of fact, they seem a race to whom fatigue is unknown. It is no uncommon sight to see an Indian with a hundred-pound pack upon his shoulder start for his camp some fifteen miles distant. I have seen, when on a hunt for fresh meat, Josie Billie, after a walk of several miles through the big swamp, shoulder a buck weighing at least one hundred pounds, and walk back to the camp without resting, when I, without any pack, and with only my six-pound rifle, would almost drop on the way. I demonstrated the ova in a specimen from Josie Billie, and treated him. I mention this simply to illustrate my previous statement.

In a very short time I exhausted my supply of thymol capsules and decided to make a special trip to Fort Myers to obtain more supplies. I expressed my desire to take a boy to Fort Myers with me, but at first it met with no response; however, the morning of leaving, Billie Konipatchie came to me and said, "Think so my boy Wilson Billie he go with you," so Wilson Billie and I made the trip of one hundred and forty miles together, being on the road six days, and neither of us able to understand the language of the other. While in Fort Myers he occupied the same room with me, slept in a bed for the first time in his life, ate at the same table, and due to his close observation of those around him, made very few mistakes. When going about Fort Myers on business he was my constant companion, never allowing me to get out of his sight. His first visit to the movies was a revelation to him, and words cannot express his delight.

Wilson Billie learned many things upon this trip, some of



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Wilson Billie learned many things upon this trip, some of

which I hope he will continue to practice, such as cleanliness and the care of his teeth, which he seemed to enjoy. I purchased a complete toilet outfit for him, and it seemed to please him very much. I was glad of this opportunity of having one of the younger generation with me. It was an opportunity, I understand, no other man has enjoyed.

In summing up the subject of hookworm among the Seminoles, it is quite evident that the disease is widespread, causing in the adult very few symptoms, but in the young it is no doubt a decided factor in the rather heavy mortality from concurrent diseases.

I made a special effort to discover pellagra among the Indians, but could find no traces. In talking the subject over with Dr. Godden, he informed me that he had not seen anything that could be taken for pellagra during his nine years among the Seminoles.

I had the opportunity of seeing over one hundred Indians. So far as I could learn, and contrary to the reports of other investigators, there are not more than three hundred and fifty left in the Glades, and I believe it is safe to say that pellagra does not exist at the present time. I might add that I talked over the signs and symptoms of this disease with both Billie Konipatchie and his son, Josie Billie, and they also assured me they had not heard of or seen such a condition.

I was able to demonstrate the tubercle bacilli in only one case, that of a brave about thirty years old, who presented himself for treatment for typical tubercular cough, loss of weight, night sweats, etc., which led me to believe I was dealing with pulmonary tuberculosis. Upon physical examination, I was unable to find any cavity in the lung, but the case seemed so suspicious I asked for and obtained a specimen of sputum which I stained and found the bacilli. This was the only tubercular case I saw, or rather, recognized.

Trachoma does not seem to be present—at least I did not recognize any cases.

I was consulted for, and treated, many cases of indigestion. The prevalence of this condition is, I think, due to irregular hours for meals, over-eating, bad condition of teeth, and hookworm infection.

Venereal diseases are not at all prevalent, and the only authen-

tic information I could gather along this line was from Billie Konipatchie, who told me of a few cases among the younger braves, who had contracted the disease when visiting Miami. Little Billie expressed himself in this manner: "Think so Indian boy have it ojus once, no have it now. Indian doctor no savvy, white doctor he savvy ojus. Think so Indian boy go to white doctor he cure him pretty quick."

It was quite evident, if allowed, that the Indian women would soon become drug habitues. One family showed signs of typical hypochondriasis, complained of all kinds of pain in every part of the body, and insisted upon taking medicine for every one. It is unnecessary to add they were not given the medicine, but were talked to firmly but gently, and advised of the bad effects of taking too much medicine.

In conclusion, will give a brief summary of diseases recognized and treated:

Hookworm, ninety cases—seventy-six completed treatment.
Malaria, about six definite cases.
Tuberculosis, one definite case.
Rheumatism and coryza, a number of cases.
Lumbago, one case.
Dysmemorrhea, one case.
Migraine, one case.
Paresis, probably specific in origin, one case.
Surgical, one case. Operated upon under local anesthesiacystic growth on right leg.
Lipoma over left scapula too large to operate upon under local anesthetic. Advised to go into town and have tumor removed in hospital.
Several emergencies, cuts and wounds about feet.
Extraction of teeth, two cases.
Sprains and bruises, number of cases.

The operation for removal of growth, done by Dr. Godden and myself, was, in all probability, the first operation performed upon an Indian in the Everglades, and was watched by a large number, who appeared very much interested. It was quite evident that I had gained their confidence, for the next day the case of lipoma was brought to me (the wife of Billie Konipatchie), and I was urged to undertake the operation. Given better surroundings and skilled assistance, I would have undertaken this operation for the moral effect it would have had.

I left the Everglades December 1st, and arrived in Fort Myers December 4th. I had the pleasure of speaking to but one person during the whole journey.

Having promised to meet some of the Indians at Mr. Storter's store at Everglade, I made the journey by launch from Fort Myers, spent three days there, and saw several Indians who could not make the journey to the mission post. It was very pleasant to renew the acquaintance of Mr. Storter and his family, whom I met four years ago when on my hookworm campaign in Lee County. I want to take this opportunity to thank Mr. Storter for his kindness and help.

I examined a number of specimens for the ova of hookworm obtained from suspected cases among the white children, with all positive results. Mr. Storter was kind enough to agree to distribute treatment packages to all suspected cases, and took a very active interest in the work.

I returned to Fort Myers, and after making final arrangements, left for Jacksonville, arriving there December 21st.

Respectfully submitted,

ERNEST W. DIGGETT,
On Special Service to Seminole Indians.

REPORT OF DR. JAMES M. JACKSON

AGENT OF THE STATE BOARD OF HEALTH, DADE COUNTY.

Miami, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.:

DEAR DOCTOR:—The time has arrived when it becomes my duty to make a report of the conditions of health as found in Dade County during the past year.

January 24th, 1913, a hack driver of Miami walked into my office in the vesicular stage of smallpox, asking me what the matter was. This man was sent to the Isolation Hospital; remained there twenty-five days, when he was discharged, cured, on February 16th. From that time on until June 30th, there was a certain amount of smallpox in Miami, though it seemed impossible to trace it; and it seemed to me that we had three separate and distinct infections; two of them being among the colored population, and one among the white—the hack driver, above mentioned.

May 1st, I was notified of a suspicious eruption among the colored population at Fort Lauderdale, which I promptly visited, and found, from the best history I could gather, that smallpox had existed among the colored people in Fort Lauderdale since February, 1913, a number of cases having gotten entirely well, and were only diagnostic by the pitting left from the disease. Being such a distance from the Isolation Hospital, I attempted vaccination, and isolation of the patients in their homes, by placarding the houses, and visiting Fort Lauderdale every few days. I thought that now when they knew that the disease was smallpox, it would create a panicky condition among the population; I therefore secured some teams and had the patients transported to the Isolation Hospital at Miami; had the houses disinfected, and a general vaccination, by which means we were enabled to stamp out the disease in a short time.

The last cases occurred June 10th, and were discharged from the hospital on June 30th.

During the fall months there were quite a few cases of dengue in Miami, and Dade County, but within the past few years people have become so accustomed to having a few cases that it causes but little alarm, and only the most severe cases are treated by physicians.

About the usual number of cases of diphtheria have been introduced, and an occasional case of scarlet fever, but with careful isolation there has been no spread, nor any alarm from any of these cases.

During the past year the City Council of Miami has passed very good ordinances for the health of the city, which has the approval of the Mayor, and now only requires a few other ordinances to be passed to make it effective. And I believe that this health board will add a great deal to the health of the citizens of Miami; and most of all gather in an accurate account of the vital statistics, which alone will be worth the money expended, but which will by no means be all the duties of the Board of Health.

Education along sanitary lines is becoming more and more general, and the screening of homes, stores and almost all houses against flies and mosquitoes, and thus preventing the noticeable spread of the disease, as it was a few years ago.

I am more convinced each year that one of the greatest goods that can come from the working of the State Board of Health, or any health organization, will come through a publicity campaign, which you are conducting so well through the Florida Health Notes and the public press.

In both my work for the State Board of Health and my private practice, I notice that the people are reading and digesting articles written along sanitary lines, and are becoming much aroused as to the carrying out of proper sanitary conditions.

Dade County, on the whole, has enjoyed a most healthful year, and her population has increased very rapidly; and a large lot of her population coming from the far Northwest, we would naturally expect the introduction of a good many diseases, but from none of

these introductions have we had any spread so as to at any time cause alarm.

Very respectfully,

JAMES M. JACKSON, M. D.,
Agent of the State Board of Health.

REPORT OF DR. D. G. HUMPHREYS

AGENT OF THE STATE BOARD OF HEALTH, NASSAU COUNTY.

Fernandina, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I beg to enclose herewith my annual report for 1913. Health conditions have been very much better in Nassau County this year than last; malarial and other fevers were mild in type. The people are waking up to the necessity of screens and, whereas a few years ago screened houses were the exception, now they are the rule; those who find it too expensive to screen the whole house, have screened the bed rooms and dining rooms, thus showing the good work of "Health Notes."

The City Board of Health, under Dr. J. L. Horsey, has been active in draining cess pools and breeding places for mosquitoes.

No cases of smallpox were reported, and as the county was very thoroughly vaccinated in 1910-11, any wandering cases that may have stopped, caused no spread of the disease, therefore were not reported.

Ten cases of diphtheria and two of scarlet fever were reported, all of a mild type. During the latter part of the year we had an outbreak of measles and whooping cough, but no severe cases. There were only a few cases of typhoid fever, and these were mild in type and traceable to outside infection.

Hookworm disease is very rare, only seen in the most isolated sections of the county, our people having taken advantage of treatment long ago.

Tuberculosis, as far as ascertainable, is about the same as in 1911-12, almost entirely confined to the colored race, and while they are being educated along these lines, they continue to sleep without ventilation.

Fernandina has a splendid sewerage system and pure water and sanitation is being pushed by the Board of Health, assisted by the ladies of the Civic League. All in all, I think we have a bright outlook for 1914. Fernandina has entered most heartily into the matter of vital statistics, and I most sincerely hope to see our State come to the front in this matter.

Respectfully,

D. G. HUMPHREYS, M. D.,
Agent of the State Board of Health.

REPORT OF
DR. RAYMOND C. TURCK

Surgeon in Charge of the Work Under the
"Crippled Children" Act.



Figure 3.—V. A. Deformity following infantile paralysis. Thighs could not be extended. Child walked as shown in illustration; could not stand erect.



Figure 3.—V. A. Deformity following infantile paralysis. Thighs could not be extended. Child walked as shown in illustration; could not stand erect.



Figure 4.—V. A. Showing partial correction after operation and four months' treatment in hospital.



Figure 5.—V. A. In braces with legs straight. Child able to walk in erect position with assistance after six months' treatment.



Figure 4.—V. A. Showing partial correction after operation and four months' treatment in hospital.



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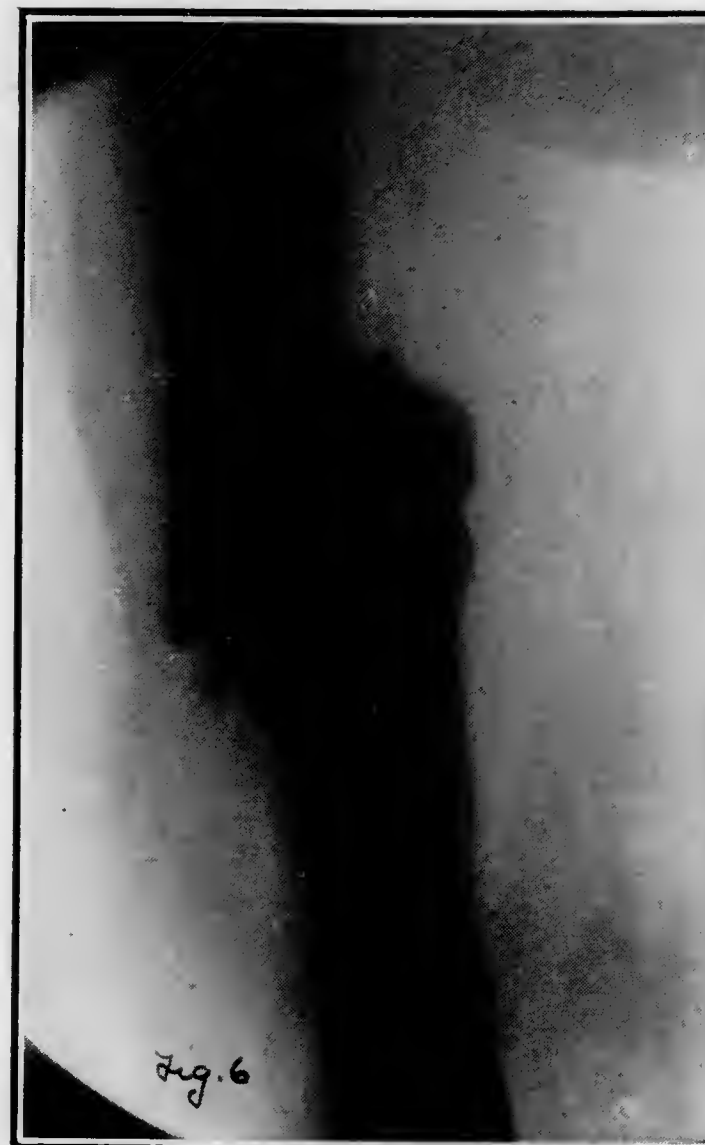


Figure 6.—C. B. X-ray photograph showing ununited, overlapped, infected fracture of the left femur. The result of several operations following a compound fracture, which operative work was done before the patient was placed under the care of the surgeons acting for the Florida State Fund.



Figure 7.—C. B. X-ray photograph showing diseased bone areas removed, the infection arrested; bone healed with sound union. The light spots in this picture are due to imperfections in the plate.



Figure 8.—C. B. Two months after operation, showing limb held in abduction by plaster cast.



Figure 9.—C. B. Final result four months after operation. Wound healed; limb sound, strong and straight; function perfect.



Figure 8.—C. B. Two months after operation, showing limb held in abduction by plaster cast.



Figure 9.—C. B. Final result four months after operation. Wound healed; limb sound, strong and straight; function perfect.



Figure 10.—J. B. X-ray photograph showing an ununited, overlapped fracture of the femur with great outward deformity, the result of treatment in a straight splint.



Figure 11.—J. B. X-ray photograph showing bone in perfect position held with a four-screw Lane plate. Union sound; wound healed. This picture was taken two months after operation and shows the two lower screws beginning to loosen.



Figure 12.—M. G. X-ray photograph showing an ununited fracture of the humerus immediately above and involving the elbow joint. The arm was fixed at the angle shown in the picture. There was not more than five degrees of motion; function was lost.



Figure 13.—M. G. X-ray photograph showing result after the humerus had been replaced and held with two loops of silver wire. External wound healed; bony union sound. The child at this time had regained strength in her arm and had ninety degrees of motion in the elbow joint; function entirely restored.



Figure 14.—C. K. Double club foot. Neglected type.



Figure 15.—C. K. In plaster cast after operative correction.



Figure 16.—C. K. Showing position and condition of feet three months after operation. Attention is called to the improved appearance of this child after three months' treatment in St. Luke's Hospital.



Figure 17.—F. P. Extreme type of neglected double club foot. It will be noted that this boy walked practically on his outer ankles.



Figure 18.—F. P. In plaster casts after first operative correction.



Figure 19.—F. P. In corrective braces and shoes four months after operation.



Figure 20.—F. P. Showing condition and position of feet after the plaster casts were removed.



Figure 17.—F. P. Extreme type of neglected double club foot. It will be noted that this boy walked practically on his outer ankles.



Figure 18.—F. P. In plaster casts after first operative correction.



Figure 19.—F. P. In corrective braces and shoes four months after operation.



Figure 20.—F. P. Showing condition and position of feet after the plaster casts were removed.



Figure 21.—J. P. Double club foot before operation.



Figure 22.—J. P. In plaster casts 6 weeks after operation.



Figure 21.—J. P. Double club foot before operation.



Figure 22.—J. P. In plaster casts 6 weeks after operation.



Figure 23.—B. S. Double club foot. Relapse from parental neglect after operation on tendons and correction in plaster.



Figure 24.—B. S. In plaster cast after operations upon the bones of the feet.



Figure 23.—B. S. Double club foot. Relapse from parental neglect after operation on tendons and correction in plaster.



Figure 24.—B. S. In plaster cast after operations upon the bones of the feet.

18

REPORT OF
BOARD OF EMBALMERS' EXAMINERS

DR. JOSEPH. Y. PORTER, CHAIRMAN;
DR. HENRY HANSON.

Jacksonville, Fla., January 1, 1914.

To the President and Members of the State Board of Health:

The report of the Board of Embalmers' Examiners is submitted herewith. During 1913, one examination was conducted, at which time licenses were granted to four applicants.

By the examination and licensing of embalmers, it is possible for the State Board of Health to effect a compliance with its rules governing the transportation of the dead.

JOSEPH. Y. PORTER,
Chairman, Board of Embalmers' Examiners.

On Friday, May 16, 1913, at the offices of the State Board of Health, Jacksonville, in accordance with Rule 61, of the Rules and Regulations of the State Board of Health, conforming with Section 1120, of the General Statutes of Florida, 1906, the Board of Embalmers' Examiners conducted an examination of applicants for license to practice embalming in the State of Florida.

Thirteen persons filed applications as required by Rule 62 of the Rules and Regulations of the State Board of Health, and were admitted to examination.

The following is a revised form of application blank for examination for embalmer's license:

STATE BOARD OF HEALTH OF FLORIDA

155

STATE BOARD OF HEALTH OF FLORIDA.

BOARD OF EMBALMER'S EXAMINERS.

APPLICATION FOR EXAMINATION.

I, -----, age ----- years,
of ----- years' experience in embalming, now actively engaged as
Embalmer: Assistant to Embalmer: Embalmer's Apprentice, in the city or
town of -----, street and number -----
County of -----, State of -----,
do hereby apply to the Board of Embalmers' Examiners for examination for
embalmer's license, in accordance with Rules 61 and 62 of the Rules and
Regulations of the State Board of Health, based upon Section 1120, General
Statutes of Florida, 1906.

I have actually embalmed under the supervision of a licensed embalmer
----- dead human bodies.

I hold license number ----- of State of -----,
dated -----.

I hold certificate from ----- school of embalming,
of -----, Date of issuance -----.

I hereby agree to comply with the rules and regulations of the State
Board of Health governing the transportation of the dead.

Remarks -----
(Signature) -----

STATE OF FLORIDA.

} ss.

-----19
Subscribed and sworn to before me this ----- day of -----19

Justice of the Peace: Notary Public.

The above application must be filled out in handwriting of applicant, and
signed and acknowledged before a Justice of the Peace or a Notary Public

I hereby certify that ----- is personally
known to me; that I know h ----- to be of good moral character.

Signed ----- Address -----

Signed ----- Address -----

Signed ----- Address -----

(Licensed Embalmer)

The above certificate of moral character must be signed by three responsible
citizens, one of whom must be a licensed embalmer personally acquainted with
the applicant for at least one year. Certificates of embalming schools or licenses

TWENTY-FIFTH ANNUAL REPORT

from other states must be presented to the Board of Embalmers' Examiners on day of examination, if in possession of applicant.

In addition to a written examination, each applicant was submitted to an oral examination, in which Messrs. C. M. Bingham and A. Moulton courteously assisted as examiners. This oral test consisted chiefly of questions in practical and scientific embalming.

The written examination consisted of the following questions:

ANATOMY.

1. Describe the Aorta.
2. The Innominate Artery.
3. The Femoral Artery.
4. Name organs in thoracic cavity.
5. Describe the pulmonary circulation.
6. Name the organs in the abdominal cavity.
7. What arteries supply blood to the brain?

BACTERIOLOGY.

1. What are bacteria? In what part of the body are bacteria always present in large numbers?
2. What shapes are bacteria? Name some of the common, important types.
3. What are the causes of putrefaction and decay?
4. What conditions are necessary for bacteria to grow and multiply?
5. What bacteria cause pulmonary consumption? Typhoid fever?
6. How would it be possible for a body to mummify?
7. What diseases can be successfully vaccinated against?
8. Under what conditions would it be safe for you to handle a body dead of smallpox?
9. What diseases are waterborne?
10. Would a ruptured vena cava be a serious obstacle in embalming a body?
11. What are the ingredients of a good embalming fluid?

RULES.

1. Does the Board prohibit the transportation of certain bodies and why?
2. Under the rules of the Board can a body dead of Asiatic Cholera be shipped?

Eligible applicants who were successful in the examination, and who were granted licenses to practice embalming in the State, are as follows:

STATE BOARD OF HEALTH OF FLORIDA

157

H. W. Cowle, Eustis, Fla. -----License No. 137
 Andrew Huff (col.), Jacksonville, Fla-----License No. 138
 F T. Blount, Tampa, Fla.-----License No. 139
 W. D. Carmichael, Melbourne, Fla. -----License No. 140

21

BACTERIOLOGICAL LABORATORIES

REPORTS OF

DR. HENRY HANSON, (Central Laboratory)
Senior Bacteriologist.

DR. G. H. SIMON, Bacteriologist, Tampa Laboratory

DR. F. A. BRINK, Bacteriologist, Pensacola Laboratory

REPORT OF DR. RAYMOND C. TURCK

SURGEON IN CHARGE OF THE WORK UNDER THE "CRIPPLED CHILDREN" ACT.

Jacksonville, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I beg to submit the following report of the orthopedic work done under direction of the State Board of Health during the year 1913.

There were handled during the year ending January 1, 1914, twenty-five patients, as follows:

Carried over from 1912	4
Admitted to Hospital	15
Examined, not admitted	3
Treated in office	3
Total, (white 22; colored 3)	25
Under treatment January 1, 1914	14
In hospital Jan. 1, 1914 (St. Luke's 7; Brewster 2)	9
The patients presented the following pathologic conditions:	
Ankylosis (Elbow 1; hip 1)	2
Arthritis (non-tubercular)	2
Club foot (Talipes varus 10; Tal. Equinovarus 3; Tal. Equinus 1)	14
Fracture (united; Femur 2; Humerus 1)	3
Fracture (Simple; Humerus 2)	2
Genu Valgum	1
Osteomyelitis (Tibia 2; Femur 1)	3
Poliomyelitis Paralysis (Lower extremity 2; trunk 1)	3
Spastic Paralysis (Lower extremity 3; Upper extremity 4; Trunk 3; Head and neck 2)	12
Synovitis	1
Tuberculosis of joints (Ankle 1; Knee 2; Hip 2)	5
Tuberculosis of spine	2
Ulcer (leg)	2
Total	52

It will be noted that more than twice as much work was done in 1913 as in 1912. This increase is, in a measure, satisfactory, and under similar conditions the work should continue to increase, as the ultimate results become more generally known, since each cured condition or corrected case of deformity returned to a community is a concrete example of the possibility of the restoration of the indigent crippled children of this State, and is invaluable in instilling confidence in doubting or timid parents.

Parental neglect, through ignorance, fear of operation, dread of painful treatment, or lack of funds, has produced the extreme types of neglected deformity that thus far the great majority of our cases have presented.

I would respectfully suggest that some work be done toward educating people to the fact that the preventive treatment of deformity, particularly the deformity following tuberculosis of bones and joints and the various paralyses, is the best treatment, and that in any event before refusing treatment, parents must look beyond the inconvenience, discomfort, and possibly the pain of the present, to the future of the neglected, hopelessly deformed child. They should be taught to compare a life-time of incapacity and distress, both physical and mental, to the few short months of treatment which might result in a useful, capable, healthy citizen.

We could do a great deal more had we the proper facilities for the care of these cases. We need an orthopedic hospital; we particularly need a kindergarten and gymnasium with facilities for the treatment or prevention of deformity in its incipiency, the time when the best permanent results are to be obtained; the same equipment is just as valuable in the after-treatment of operative cases.

During the past year we have returned children to their homes untreated, because we did not possess adequate equipment; we have refused to receive a number of others for the same reason.

In certain types of cases, particularly the old neglected contracture deformities, too often we see our best work left incomplete, or see our good results relapse to their former condition because of lack of an adequate gymnasium and a trained gymnastic teacher. We need a hospital where we can properly care for our cases long enough to complete our work, to not only thoroughly correct deformity, but build up bodies and minds.

In practically all cases of bony deformity, after the operative work on bones or joints, it is necessary to develop the muscular and nerve structures to not only provide for useful limbs, but to prevent a relapse to the pre-operative condition.

Of our cases in hospital at present, but one can read, and this is not because of mental defectiveness, but because these children have not been able to attend school on equal terms with sound children. Again, in many orthopedic cases, particularly the spastic paralyses, there is mental deficiency which requires special training; while correcting the physical ills, the mind should be developed. I would add, too, to our hospital equipment something in the line of manual training, such as carpentry and other handicrafts for the boys, sewing, basket-weaving, drawing, etc., for the girls.

From an economic standpoint only, the conversion of twenty dependent cripples into strong, self-sustaining, useful citizens, would justify the State in building an orthopedic hospital and maintaining it for ten years.

The new St. Luke's Hospital will open in January, 1914; it will be complete and modern in every particular, "up to the minute" in every detail, save the one that complete and permanent provision for the children has yet to be made. It is hoped that some time in the near future a children's ward will be erected to provide for the general medical and surgical diseases of infancy and childhood, but even that will not fulfill all the special requirements of this work. The treatment and physical training of orthopedic cases should be carried on in special wards, that the exercises, kindergarten work, rest periods, etc., may be regulated without interfering with or interference from the general medical and surgical patients.

Since the Legislative act authorized the expenditure of twenty thousand dollars for the purchase or erection of a hospital for indigent crippled children, I would suggest that the State erect a ward for its crippled children in connection with the new St. Luke's Hospital on some such basis as the city of Jacksonville provided a ward for contagious diseases. The advantages of such an arrangement would be many. The State could care for its children under ideal conditions, and at a minimum of expense. Certainly the cost would not be more than one-third the amount required to maintain

a separate hospital. To operate a separate hospital and to provide the same efficiency in supervision, nursing, operating room, attention of house doctors, etc., as would be furnished by St. Luke's would not be possible under double the present yearly appropriation.

In accordance with your request, I am submitting herewith sketches of plans for such a ward in connection with St. Luke's, which could be erected and furnished at a maximum cost of \$20,000.00, and which would be sufficient for the needs of the State cases for a number of years to come.

In this connection, I beg to call your attention particularly to the accompanying photographs of some of our cases. Please note the condition of the children before entering St. Luke's—practically every one of them with the sign of the helpless, hopeless, cowed cripple, not one but with his pitiful story written in every feature and every glance; many with hookworm, and almost all with the pallor and lassitude of anemia. Compare these photographs with some of the healthy, robust, rosy, hopeful, happy children leaving the hospital; that is the best report that I can make of the care received by the children in St. Luke's.

This report would be incomplete without mention of the invaluable service rendered by Miss Mary A. Baker, Superintendent of St. Luke's Hospital. Much of the improvement shown in these children has been due to the intense interest manifested, the loving and faithful care given and the constant attention shown by Miss Baker. She has been more than an efficient supervisor of their treatment; she has been a nurse in every sense of the word, a mother, a big sister, a friend and a teacher to the children. She has taught them patience, fortitude, self-control and unselfishness; she has taught them to try to help themselves and to help others; she has installed in them the principles of obedience and courtesy, as well as cleanliness of body and mind.

I wish to acknowledge the efficient and conscientious service rendered these children by my associate, Dr. William Buffalow. I also desire to acknowledge valuable services rendered by Drs. W. E. Ross and J. D. Love, of the medical children's service, Dr. James H. Randolph, of the nervous and mental service, and Drs. W. S. Manning and Norman Heggie, of the eye and nose service of St.

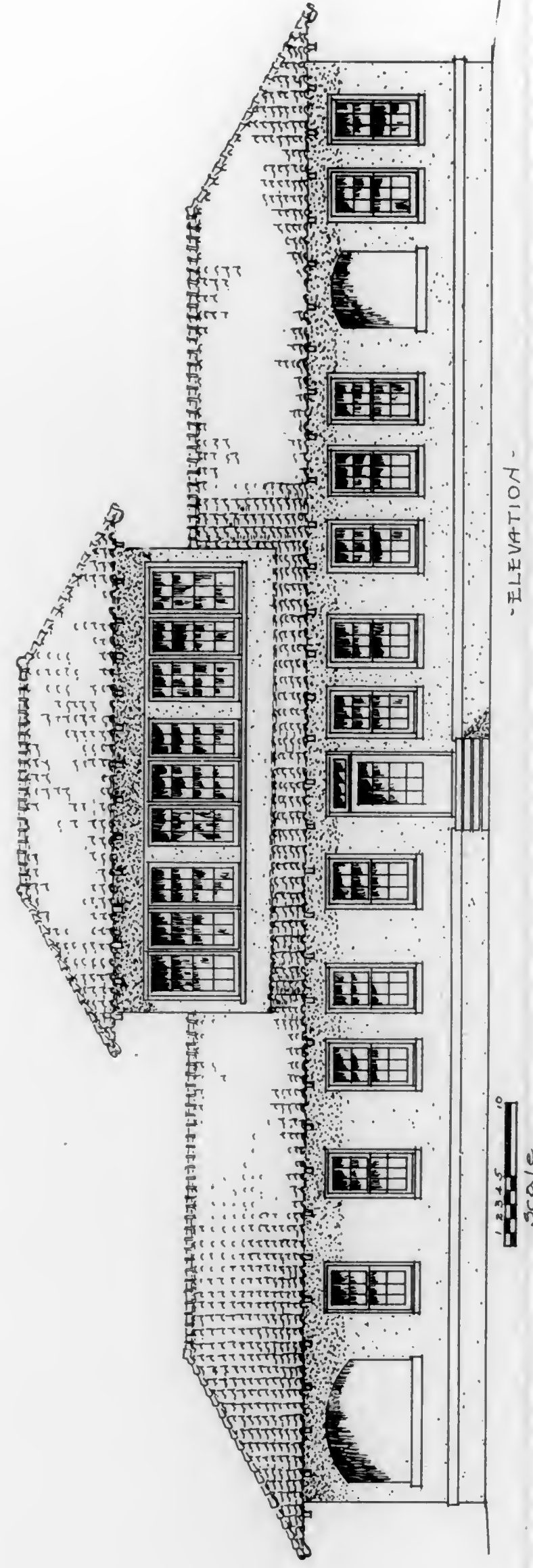


Figure 25.—Suggestion for orthopedic ward at St. Lukes Hospital, Jacksonville. The second floor to be equipped as a gymnasium and kindergarten, to be of glass in the winter and screened in the summer.

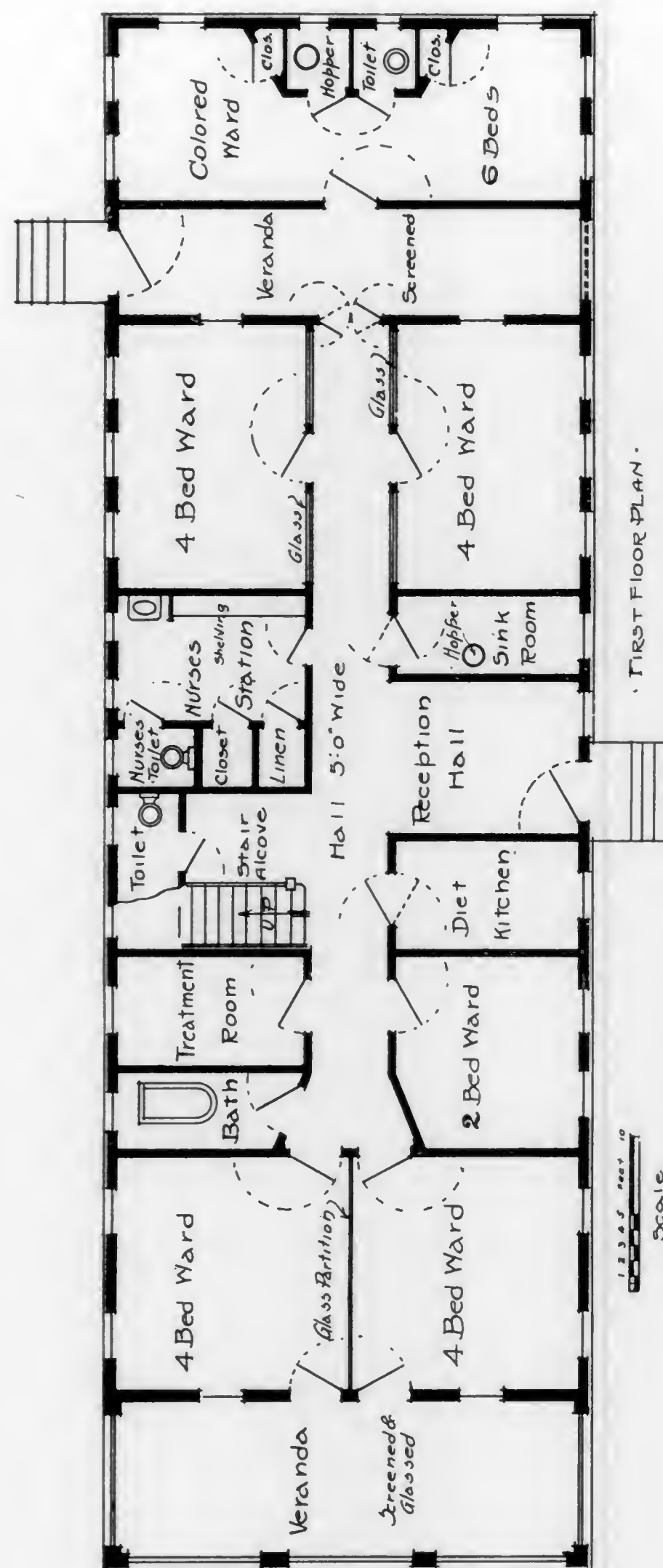


Figure 26.—Suggestion for the floor plan of the orthopedic ward.

Luke's Hospital; also the services of Dr. Graham E. Hensen as to various blood and other examinations.

The X-ray pictures incident to the work have all been taken by Dr. L. W. Cunningham. Dr. Cunningham has practically done the actual work without cost to the State, charging only for the materials used. His most excellent plates, and his interpretation of them have been of great assistance, which is hereby acknowledged.

Finally, I desire to say that my own pleasure and satisfaction in this work has been materially augmented by the consideration, appreciation and helpful interest manifested by the State Health Officer. The indigent crippled children of this State are indeed fortunate in having the means for and the direction of their relief placed in his hands.

Respectfully submitted,

RAYMOND C. TURCK.

The following are brief histories of cases treated during the year 1913:

CASE 1. I. A., white male, age two years, Lulu, Fla. Admitted June, 1912, with double congenital club foot. Operated at St. Luke's Hospital in June and August, 1912. Following operation treated in plaster until May, 1913, when shoes and braces were fitted and the child returned to his home with feet perfectly straight and strong. Case has been under observation since.

CASE 2. P. A., white male, age four years, Greenville, Fla., referred by Dr. J. F. Mixson of Greenville, in December, 1913, with acute synovitis of the knee and ankle, accompanying tuberculosis of the joints. Right knee was flexed at an angle of 45 degrees; now under treatment in extension traction.

CASE 3. B. A., white male, age two years, Dukes, Florida, referred by Dr. W. E. Middleton, Worthington, with congenital club foot; child had never walked. Operated in November, 1912, and February, 1913, at St. Luke's Hospital. Treated in plaster until April, 1913, when shoes and braces were applied and child returned to its home with foot in excellent condition. Figures 1 and 2.

CASE 4. R. A., female, white, age five years, Micanopy, Fla. Referred by Dr. E. B. Howell, Micanopy, in January, 1913, with spastic paralysis both lower limbs, right upper extremity, trunk and face. Owing to the fact that we did not possess equipment and facilities necessary to treat such cases this child was returned to her home.

CASE 5. V. A., white male, age seven years, Christina, Fla. Referred by Dr. C. C. Pearce, Christina, Fla. This boy had infantile paralysis at five years; following this there was a flexion contracture of both thighs with flaccid paralysis of the legs and marked lateral curvature of the spine; both

thighs were rigidly fixed at an acute angle with the trunk. The child walked like an animal—(Figure 3), could not stand erect nor maintain body in erect position. Operation July 8th, 1913, St. Luke's Hospital under ether anaesthesia. All contracted tendons and muscles were cut, the limbs straightened and a double plaster spica was applied with the thighs in extension and abduction. Case has since been treated in plaster cast together with daily massage, manual Swedish movements and exercises. Partial correction October, 1913, shown in Figure 4. Condition January 1st, 1913, with child in plaster spinal jacket and braces is shown in Figure 5. Case still in hospital.

CASE 6. C. B., white male, age ten years, Jacksonville, Fla. Admitted St. Luke's Hospital, October, 1912, with ununited fracture middle third left femur. Report of condition and operation given in annual report State Board of Health 1912. The primary condition, subsequent progress and final result of this case is shown in Figures 6, 7, 8, 9. Case discharged thoroughly healed with sound bony union and a useful limb February, 1913.

CASE 7. J. B., white male, age fourteen years, Trenton, Fla. Admitted St. Luke's Hospital March 14, 1913, with ununited fracture of the left femur of nine weeks standing. X-Ray Figure 10. This shows great outward deformity, overlapping and nonunion. Operation, March 22nd, 1913, St. Luke's Hospital under ether. The old ragged callus was removed, the bones then freshened and approximated with a four screw Lane plate. Wound healed without difficulty. Sent home May, 1913, in good condition with sound bony union and a useful limb. Radiograph showing bony union solid with Lane plate in place shown in Figure 11.

CASE 8. R. C., white male age seventeen years, Jacksonville, Fla. Admitted to St. Luke's Hospital in October, 1913, with an old marked kyphosis from tuberculous spine, dating from three years of age. Two abscesses leading from the diseased bone area had been previously opened and radiograph revealed destruction of three thoracic vertebral bodies. There was paralysis of the lower extremities which began September 13th, 1913; treated in extension; discharge of pus through old wound November 17th, 1913; sinus injected with bismuth paste. Still under observation and treatment; showing marked improvement in use of limbs.

CASE 9. L. D., white male, age thirteen, Jacksonville, Fla. Referred by Associated Charities, with arthritis of both knee and both ankle joints. Not yet admitted to the hospital.

CASE 10. Baby D., white male, age two months, Quincy, Fla. Referred by Dr. R. F. Godard, Quincy, Fla., with double congenital club foot (talipes equino varus). November, 1913, treated in office. Feet placed in plaster cast and progressive correction in plaster continued.

CASE 11. A. F., white male, age twelve years, Greenville, Fla. Referred by Dr. J. F. Mixson, Greenville, with extensive ulceration of both legs, result of osteomyelitis and periosteitis. Entered hospital with marked pyocyanus infection. Treated until operation October 18th, 1913, St. Luke's, when the ulcerated areas were thoroughly curetted; diseased bone also curetted and chiseled out. Patient still in hospital.

CASE 12. S. F., white male, age sixteen years, Wellborn, Fla. Referred by Dr. P. T. McClellan, Wellborn, with contracture deformity of left knee, hip and wrist, also talipes equinos, the result of congenital spastic paralysis.

This patient also is unable to walk. Operation St. Luke's Hospital under ether October 28th, 1913. All contracted tendons and muscles of the left lower limbs were divided, the position of the foot was corrected and the limb put in plaster in good condition. Second operation at St. Luke's, under ether, November 19th, by Dr. William Buffalow. Tenotomies of all flexor tendons controlling the wrist and fingers; hand and arm in plaster. Leg cast renewed. Patient still in hospital.

CASE 13. M. G., white female, age eleven years, Jacksonville, Fla. Admitted to St. Luke's Hospital in 1912 with tuberculosis of the left knee joint and ununited fracture, involving the right elbow joint. Preliminary report in Annual Report, State Board of Health, 1912. Continued observation and treatment of tubercular knee joint during 1913. Joint greatly improved; process apparently entirely cured, giving the child a flexible and useful limb. Patient has in addition an almost perfect elbow with ninety degrees of motion. Figures 12-13.

CASE 14. W. G., white male, age three years, Bartow, Fla. Examined in November, 1913. Case of spastic paralysis involving upper extremities and back. Not admitted to hospital because of lack of proper equipment and facilities.

CASE 15. R. H., white female, age fourteen years, Williston, Fla. Admitted St. Luke's Hospital February, 1913, with spastic paralysis general in all limbs and slightly in muscles controlling head. There were no deformities and no permanent muscular contractures. This patient was returned to her home because she could not be provided with proper treatment.

CASE 16. C. K., white male, age six years, Fenholloway, Fla. Admitted St. Luke's Hospital October, 1913, with double congenital club foot (talipes equino varus—neglected type). Figure 14. Operation St. Luke's Hospital under ether October 28th, 1913. Tenotomies were done on both tendo Achilles and cuneiform resection of the bones of both feet was done; then feet were put up in plaster in valgus position, Figure 15. The condition January 1, 1914, is shown in Figure 16.

CASE 17. R. L., white male, age ten years, Jacksonville, Fla. Entered St. Luke's Hospital July, 1913, with tuberculosis of the left hip joint in the sub-acute stage. Radiograph revealed involvement of the acetabulum and head of femur. Placed in plaster and such treatment continued. Condition January 1st, 1914, greatly improved; free from pain; process apparently arrested. Still under treatment.

CASE 18. M. L., white female, age nine years, Daytona Beach, Fla. Admitted St. Luke's Hospital in October, 1913, with marked curvature of the spine, the result of tuberculosis beginning at two years of age. Placed in plaster jacket with jury mast extension in the attempt to correct the deformity. December, 1913, developed an acute exacerbation of an old tubercular process in the right lung. Still under treatment in hospital.

CASE 19. F. P., white male, age seven years, Elkton, Fla. Admitted St. Luke's Hospital with double congenital club foot (talipes varus—extreme neglected type) Figure 17. This child was walking almost entirely upon the external ankles. Operation on right foot February 4th, 1913, St. Luke's Hospital under ether. Tenotomies and cuneiform osteotomies of metatarsals and foot put in plaster. Operation on the left foot similar to that done on the

right at St. Luke's March 18th, 1913. The progress and final result of this case are shown in Figures 18, 19, 20. Child returned to his home in July, 1913.

CASE 20. J. P., colored male, age two years, Jacksonville, Fla. Admitted to Brewster Hospital in October, 1913, with double congenital club foot (talipes equino varus) Figure 21. Operation at Brewster Hospital October 27, 1913, under ether; tenotomies and osteotomies both feet. Placed in plaster cast in valgus position. Figure 22. Case discharged from hospital but still undergoing office treatment with progressive plaster cast.

CASE 21. F. P., white female, age ten years, Jacksonville, Fla. Admitted St. Luke's Hospital 1913 with tuberculosis of the left hip joint of five years' duration. The process has been apparently healed but was sub-acute upon admission. There was ankylosis of the hip joint, the thigh being fixed at an angle of forty-five degrees. Patient still in hospital; acute condition subsided.

CASE 22. B. S., colored male, age two years, Jacksonville, Fla. Congenital double club foot (talipes equino varus) relapse from neglect after correction) Figure 23. Report in Annual Report State Board of Health 1912. Operation Brewster Hospital October, 1913, under ether. Cuneiform resection metatarsal bones of both feet. Feet placed in plaster in valgus position (Figure 24). Patient still under treatment.



Figure 1.—B. A. Right club foot (talipes equino varus.)



Figure 2.—B. A. In adjustable shoe after correction by operation and treatment in plaster casts.

right at St. Luke's March 18th, 1913. The progress and final result of this case are shown in Figures 18, 19, 20. Child returned to his home in July, 1913.

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CASE 22. B. S., colored male, age two years, Jacksonville, Fla. Congenital double club foot (talipes equino varus) relapse from neglect after correction) Figure 23. Report in Annual Report State Board of Health 1912. Operation Brewster Hospital October, 1913, under ether. Cuneiform resection metatarsal bones of both feet. Feet placed in plaster in valgus position (Figure 24). Patient still under treatment.



Figure 1.—B. A. Right club foot (talipes equino varus.)



Figure 2.—B. A. In adjustable shoe after correction by operation and treatment in plaster casts.

REPORT OF DR. HENRY HANSON

SENIOR BACTERIOLOGIST.

Jacksonville, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I beg to submit the following report of work accomplished in the Central Laboratory of the State Board of Health for the year 1913, together with a tabulation showing patronage of the laboratory and distribution of communicable diseases as diagnosed in the three laboratories of the State Board of Health. In this we find that communicable or preventable diseases have been present in one hundred and fifty-five localities in the State. Such diseases have been more prevalent in the large cities, where the number is, on the whole, in proportion to the size of the city, with the exception of the figures given for Tampa and Jacksonville.

The number of specimens received for examination in the Central Laboratory has been the greatest in the history of the State Board of Health. We have had during the year fourteen thousand, five hundred and seventeen specimens submitted for examination, of which we have examined fourteen thousand, five hundred and sixteen; one specimen being unaccounted for. These specimens have been received from two hundred and thirty-eight cities and towns within the State, a tabulation of which is given below. In referring to this tabulation, you will find that thirty-seven towns have submitted only one specimen each; a large number less than ten each, and only fourteen one hundred or more for the year. We cannot give comparative statistics of this kind for previous years, inasmuch as we have not made a tabulation of this nature in the past three years. It will be noted, however, that the larger cities are the ones submitting the largest number of specimens, which is natural enough, in that communicable diseases will be more prevalent in communities where the number of contacts is greater.

Tampa has had one hundred and eighty-four more cases of communicable diseases than has the city of Jacksonville. The significance of this one might attribute, in part, to the difference in the activity of the local Boards of Health. The natural health conditions cannot be so materially different as is indicated from the figures which we are submitting. If one takes the total number of examinations in the two places one will find that the city of Jacksonville has submitted seven thousand, eight hundred and eighty-six specimens for examination, with six hundred and forty-seven positives, as recorded in our tabulation of communicable diseases, while Tampa has approximately the same number, with eight hundred and thirty-one positives. This is accounted for by the higher diphtheria, malaria, typhoid and tuberculosis rate than that for the city of Jacksonville. As far as the State Board of Health is concerned, it offers equal advantages in both cities, or if there is any discrepancy, it is in favor of Tampa, in that the laboratory at Tampa is not required to do so much work, and does not have to respond to the same territory that the Central Laboratory does. Tampa leads in all things except rabies. Jacksonville has had twenty-four more cases of hydrophobia than Tampa.

From the tabulation it would seem that the hydrophobia situation was less serious than formerly, but it is a fact that we have had five deaths in this city during the past year; four of these being otherwise healthy men. The only encouraging feature of the hydrophobia situation is that during the second half of the year after the impounding of dogs was taken out of the hands of the City Marshal, there has been a decrease in the number of dog's heads submitted for examination in this laboratory, as well as in the number of humans bitten. The five cases who have died in Jacksonville have, with one exception, been instances where those bitten failed to take the treatment. The one exception is that of a five-year-old boy, who was so horribly bitten in the hand, arm, face and mouth, that the amount of infection was so great the Pasteur treatment failed to produce sufficient immunity. Of the four men who died, all had neglected to take the Pasteur treatment.

In three of these cases we tried out varying doses and methods of quinine administration, being justified in resorting to such therapy by the reports of Moon,* of Chicago, and Harris,* of St. Louis.

In the first case we clearly gave an insufficient quantity of quinine, and the patient apparently derived no benefit. In the second case, we gave what seemed to be enormous doses. In fact, we gave more than three hundred grains of quinine in three days. In this case it seems that the course of the disease was modified, but the man died on the fifth day. In the third case, where quinine was administered, we gave certain quantities by mouth and other doses by hypodermoclysis. We also gave one intra-spinal dose. The spinal anesthesia which took place in this case temporarily paralyzed the lower extremities, rendering the patient unable to get out of bed or run about and do injury either to himself or the nurses in attendance. The mental effect was striking. This case was the only one where the mental attitude passed from one of pronounced pessimism to one of true optimism. The patient died, however, after the fourth day, and examination of the brain showed the presence of negri bodies.

I reviewed the rabies situation at some length for the State Medical Association last spring, and hoped that this subject might receive sufficient attention from the medical profession to enable us to very decidedly lessen the disease. There has been less of hydrophobia in the State as a whole during the second half of the year than for the same period in 1912. We are receiving more heads from doubtful and negative cases than we formerly did, which indicates that people are becoming more cautious, and are recognizing the seriousness of the disease.

It certainly is a serious matter when people are attacked in their homes by the stray curs running at large. We had an instance of this kind in the highway section of this city last spring. A rabid dog entered a man's house and attacked two of his children, biting both children severely, while they were in the kitchen of their own home. The head of this dog was sent to the laboratory, where we found unmistakable evidence of hydrophobia.

It has been my desire for the past three years to make a study of the virus of rabies with the hope of suggesting some means tending toward its eradication. I might say, parenthetically, that we know what is necessary for the eradication of hydrophobia but from our past experience it seems that our prescription is not accepted. As I have said before it is only necessary to enforce

the muzzling ordinance and the license tax in order to eliminate this disease from the State.

During the past year several investigators have taken up the study of the nature of the virus and have published articles on the subject without any final definite conclusions. Noguchi, in a recent article spoke of certain bodies which have been grown artificially. His findings are not accepted by Dr. Anna Williams, of the New York City Board of Health Research Laboratory, as conclusive that he has succeeded in growing the organisms of rabies. She does not seem to think that he has made it sufficiently clear that he has bodies which are distinctly those of hydrophobia. Dr. Williams has also made certain cultural investigations and has found her research to indicate that the negri bodies proliferate in brains kept in an ice box at such temperatures that the saprophytic bacteria are inhibited in their growth. About a year ago I made some attempt to cultivate the negri bodies on the same plan as that used by Dr. Williams, in certain brains which we found not to be very heavily infected as shown by a microscopic examination. I found on reexamination of the brains kept in the ice box at temperatures of from forty to forty-five degrees Fahrenheit, for periods of four to seven days, that the bodies which before had been very difficult to find on account of their extremely minute size had grown to easily recognizable typical negri bodies. Unfortunately the work had to be abandoned for the reason that all other problems other than the routine work have been abandoned, namely: lack of facilities and sufficient help in the Central Laboratory.

It is impossible to accomplish anything of any special moment in laboratory investigations without an animal house where laboratory animals can be properly cared for. We have attempted to improvise a simple place for keeping inoculated animals but the fence has repeatedly been broken down by stray dogs and the animals have been killed. Some of these animals have been rabbits inoculated with brain material from dogs and other animals suspected of having rabies and which animals had bitten men, women and children. When these rabbits were killed we were unable to render the information which we should be able to give in cases of this kind. It then became necessary to advise the persons bitten that "the only safe thing to do is to take the Pasteur treatment,"

or, "take your chances that the dog was not mad or if it was that you will not develop hydrophobia." For one who has passed through the epizootic here in Jacksonville during the past three years, this is far from satisfactory. It is horrifying to stand at the bedside of persons who have developed hydrophobia when one knows that it is one more death which should have been prevented and that one is absolutely incapable of doing anything to lessen the suffering of the patient or to prevent death. For this reason I do not believe that it is exaggeration to say that the "animal house is as urgent as the microscope in the laboratory, for work of this kind." The original plan of the animal house was revised in such a way as only to ask for the actual needs of such a structure and reduce the expenses. I sincerely trust that this structure can be built in the near future.

DRINKING CUP.

The drinking cup experiments have been fewer than we anticipated. We have not done enough to draw the general conclusion we had hoped to. All we can say so far is that the glasses used at many of the soda fountains are positive conveyors of disease on account of improper cleansing. Much of the material served in these glasses is a good bacteriological medium and has been found to harbor pathogenic bacteria.

DIPHTHERIA CARRIERS.

A wholesale investigation of diphtheria and diphtheria carriers has been conducted by the City Board of Health in the local schools. Approximately two thousand such cultures have been examined by the Central Laboratory during the fall, in which we found a little over three percent of diphtheria carriers among apparently healthy school children.

In Jacksonville we find that there have been one hundred and eighty-nine cases of diphtheria as compared with two hundred and four cases in Tampa. The difference here is not so great on the face as it becomes when one stops to consider how these have been recognized. The City Board of Health in Jacksonville has

made a very vigorous and active campaign in locating diphtheria cases and diphtheria carriers and as a result many cases have been found which otherwise would have gone unrecognized. In Tampa there has been no active campaign and it is natural to conclude that some cases have been missed and if equally active search had been made in Tampa the number would have been greater. In this tabulation we did not include carriers who had no active symptoms of diphtheria.

After returning from Minneapolis last summer I suggested the use of cultures of lactic acid bacilli in salt solution or in whey bouillon as a spray in the throat and nasal passages of convalescent diphtheria patients, and in diphtheria carriers. This I suggested after hearing a report on the use of this method by Dr. Harold Wood, of Rochester, Minn. The spray has been used by a great many of our local physicians, by the medical school inspectors and the school nurses and by a few physicians at various points in the State, especially by Dr. F. C. Moore, at Tallahassee, and Dr. McKinnon, at DeFuniak Springs. The report of results from the last two physicians is not very encouraging and it does not seem that the method is as efficient as we at first hoped it might be. Dr. Terry, however, reported to the Duval County Medical Society that the lactic acid spray had a small margin of advantage over the use of the ordinary chemical antiseptics.

MALARIA.

Out of a total of two thousand three hundred and twenty-nine specimens submitted for examination for malaria in the Central Laboratory, we have found two hundred and fifty-six positive, or approximately eleven percent positive. In this connection I am led to believe that there are too many clinical diagnoses of malaria. The tendency in sub-tropical climates of this kind is to consider nearly every ill malaria, and all persons who become indisposed first think of taking quinine or other chill tonics. The result is that a great many specimens received from true cases result in a negative report on account of such medication. I also believe that a great many of these patients would get well as quick without the use of quinine. Our laboratory examinations do not indicate that

there is any serious increase of malaria in the State. The tabulation of the six principal diseases shows that of two thousand, five hundred and twenty-nine specimens examined in 1910, six hundred and twenty-four were positive, while in 1913, five thousand, six hundred and seven specimens only showed five hundred and one positive.

TYPHOID.

Typhoid fever seems to be on the decrease in the State as a whole. In 1910, there were examined for the State as a whole one thousand, nine hundred and thirty-eight specimens of blood, with five hundred and forty-two positive widals. In 1913, the three laboratories made three thousand, three hundred and ninety widal tests, with only six hundred and four positive.

The typhoid rate for Jacksonville and Tampa shows a much greater discrepancy than any of the other diseases. We note in our tabulation of communicable diseases that in Tampa there have been one hundred and ninety-five diagnosed cases of typhoid, while in Jacksonville there have been only ninety-one, showing one hundred and four more positive widals for Tampa than for the city of Jacksonville.

TUBERCULOSIS.

We are yearly receiving a larger number of specimens of sputum for examination for tubercle bacilli, and are finding a correspondingly greater number of positives. In connection with sputum examinations the point to emphasize is that there are not enough of such examinations made. A great many physicians place too great reliance on a single negative report. A great many of the sputum specimens submitted are not suitable for examination, in that they consist of a small quantity of salivary secretion with bits of mucus from the nasal passage, and do not represent bronchial secretion. Naturally these are negative. Patients should be instructed to try to raise mucus from the lungs when a specimen is submitted for such examination. Otherwise a negative report may afford a false sense of security, in that it does not represent the true state of affairs.

In 1910 we examined one thousand, five hundred and fifteen samples of sputum, and found tubercle bacilli in three hundred and

eighty-five. In 1913, out of two thousand, nine hundred and sixty-four examinations, we found eight hundred and sixteen to show tubercle bacilli; an increase of two per cent.

HOOKWORM.

The number of hookworm specimens submitted has gradually decreased since 1910. This is due to a very large extent to the fact that the physicians of the State are recognizing the disease without laboratory examinations. Also to the fact that many of them are making their own microscopic examinations for hookworm, and I believe that it is also due to the fact that the State Board of Health, through its field men, is not conducting as active a hookworm campaign as I did in 1910. Our hookworm examination for the State is not more than about one-half of what it was in 1910, when we made seven thousand, four hundred and eight such examinations, as compared with three thousand, eight hundred and eighteen for the year 1913.

VENEREAL DISEASE.

We are receiving each year an increased number of specimens to be examined for gonococci, and we note from the tabulation that our examinations for 1913 are practically double what they were in 1910. It seems that this disease, on account of its insidious nature and the serious consequences in latent cases, should be made reportable.

WATER EXAMINATIONS.

We are constantly called upon to examine water for various points in the State, and almost invariably we find the water is negative for sewage contamination. Practically all the water in the State is from artesian wells, and wherever such water is properly collected it is found to be bacteriologically pure. It seems that the only impure water that we have in the State is such water as is obtained from unprotected surface wells. I would, therefore, suggest that it is a waste of time and material to continue making

such water analyses unless there is some epidemiological reason for the examination.

PATHOLOGICAL TISSUES.

We have had ninety-nine specimens of tissues submitted from various pathological conditions, of which we have found twenty-six to be of a malignant nature. The nature of these specimens will be noted at the bottom of page one, of statement of specimens examined.

GLANDERS.

One of the most unusual conditions encountered in our examinations for the year concerns a man who had contracted glanders from a horse. This man contracted this infection by scratching off a piece of skin from his finger on the tooth of a glandered horse. He developed multiple abscesses, cultures from which showed bacilli, and which were proven by animal inoculation to be glanders bacilli. The unusual result in this case is that the man did not die, but developed chronic glanders, from which he has been suffering for several months. This will no doubt be taken up in the report of the Veterinarian.

LABORATORY EXTENSION.

Recently there has been some talk of further extension of the laboratory system in the State on account of the length of time consumed in sending specimens to the laboratory and obtaining reports sufficiently prompt to make such laboratory examinations of proper value. It is true that the southern part of the East Coast is entirely too far from the Central Laboratory to be able to use the laboratory with satisfactory results. The railroad facilities are not such that the East Coast can patronize the Tampa Laboratory with any degree of satisfaction. For that reason it would seem to me appropriate that the State Health Officer should recommend to the Board to establish a laboratory at some point on the East Coast, and it would seem that Miami is the most logical point for such laboratory. A laboratory there could take care of the urgent work as far north as Cocoa. Tallahassee has also made certain

representation tending to show that a laboratory is much needed in that section. Tallahassee has submitted the largest number of specimens of any city in the State outside of those where laboratories are located at the present time. Tallahassee, however, could obtain, for the present, at least, fairly satisfactory results by observing its train schedules when submitting specimens to the Central Laboratory or Pensacola. Miami and the other East Coast towns, on the other hand, cannot patronize the laboratory advantageously on account of the length of time consumed in transit of specimens.

When this matter of extension of the laboratory system comes up one will have to proceed cautiously in order to avoid too much division of energy, and also avoid locating laboratories simply from the standpoint of political favors. I believe it would be unwise to attempt to erect extensive buildings in many points in the State, in that the initial outlay would be unduly expensive, and it would also tend to make the cost of upkeep of the laboratory system too high. It is especially important to centralize effort of this kind as much as possible, and such effort should be made where the need is greatest.

The three laboratories this year have examined twenty-seven thousand, one hundred and three specimens; an increase of ten thousand over 1910. The indications are that the laboratory patronage is going to continue to increase. This work has been accomplished by the same force as that which was severely taxed to examine twenty-one thousand specimens in 1912. This is really more work than can be satisfactorily handled by the present laboratory force within the State.

The personnel of the Central Laboratory consists of Dr. Iva C. Youmans, First Assistant; Dr. W. A. Claxton, Second Assistant. The position of stenographer for the first few months of the year was held by Miss Lucille Dixon. During the summer months, Miss Clara Thompson rendered invaluable service in that position, and at the present time Miss Pearl Griffith is most satisfactorily filling the position. In addition to this, Mr. H. P. Brown, the Sanitary Patrolman of Duval County, has spent the greater part of his time in the laboratory; and in fact, we would have been absolutely unable to accomplish the work reported without his assistance. The two laboratory boys, E. T. Copp and Hugh

Roberts, have had their hands more than full to keep up with such menial work as they have had to do during the past year.

We have been further handicapped with our work in the Central Laboratory for the reason that the Central Laboratory has been called on to supply help during vacation periods in the laboratories at Tampa and Pensacola. This has taken one bacteriologist out of the laboratory for three months out of the year. The work reported seems to me to clearly justify the addition of more skilled help, either a competent technician or a utility assistant.

Dr. Youmans, Dr. Claxton, Mr. Brown and E. T. Copp deserve special mention for their untiring efforts in behalf of the laboratory during the past year.

We have been assisted during July, August, September and October by field men who have been detailed at the laboratory for work, and it is only fair to state that we would have been incapable of carrying on the work without this help from the field men. I am especially indebted to Dr. M. E. Heck, who put in the longest period of service in the laboratory.

In conclusion, I wish to thank the State Health Officer for his ready response to the requests of the laboratory, and for his helpful advice in carrying on the work.

Respectfully submitted,

HENRY HANSON,
Senior Bacteriologist.

STATEMENT OF SPECIMENS EXAMINED
In the Central Laboratory, Jacksonville, Florida, 1913.

MATERIAL EXAMINED	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL	GRAND TOTAL
Animal Parasites:														
Hookworm:														
Positive	87	79	130	89	79	75	67	81	78	64	43	42	914	
Negative	107	106	162	124	98	101	128	110	97	116	81	87	1317	
Unfit			6		1	2			1		2		12	
Amoeba	3	2			1		2		3	3	1	2	17	
Ascaris	5	4	2	6	2	4	1	2	6			1	33	
Lambliia						1							1	
Oxyuris	1				2	1		1					1	
Strongyloides		1		2			2		1	2	1	1	12	
Tapeworm	4	6	4	5	3	3	4	3			2		3	
Trichiuris	4	2	12	8	1	1	2	3	5	2		1	35	
Diphtheria:													40	2384
Swabs:														
Positive	11	12	8	6	22	21	12	13	35	23	14	4	181	
Negative	37	43	42	22	52	43	46	34	69	99	105	36	629	
Doubtful	17	9	1	7	16	8	10	10	16	31	24	8	157	
Cultures:														
Positive	18	24	20	11	57	91	48	29	85	148	113	50	694	
Negative	57	50	65	34	62	159	160	75	198	1502	629	358	3349	
Doubtful	3	3	8	1	8	9	5	18	18	87	11	10	181	5191
Gonorrhoea:														
Positive	10	17	19	20	19	6	14	11	15	15	23	14	183	
Negative	23	12	12	15	14	27	13	15	16	20	16	20	202	
Doubtful	1	2	1	6	1	6	5	6	9	3	4	8	52	437
Malaria:														
Positive	15	24	25	15	17	34	24	28	37	18	12	7	256	
Negative	124	108	132	159	181	184	203	159	217	204	119	138	1928	
Doubtful	16	19	15	9	15	14	28	12	5	3	7	2	145	2329
Pathological Specimens:														
Chorio-Epithelioma			2										2	

*Carcinoma	1	---	1	3	1	2	1	1	1	3	2	---	16
+Sarcoma	---	---	1	1	1	---	1	2	---	2	---	---	8
Fibroma	---	---	---	---	---	1	---	---	---	---	---	---	1
Goitre	---	1	---	---	---	---	---	---	---	---	---	---	1
Hypertrophic Glandular Endomet- ritis	---	2	---	---	---	---	---	---	---	---	2	---	4
Myo Fibroma	---	---	---	---	---	1	---	---	---	---	---	---	1
Normal Skin	---	1	---	---	---	---	---	---	---	---	---	---	1
Placental Tissue	---	1	---	---	---	---	---	---	---	---	1	---	2
Syphilis	---	---	---	1	2	1	---	---	---	---	---	---	4
Veruca	---	---	---	1	---	---	---	---	---	---	---	---	1
Unclassified	5	4	4	6	2	4	4	6	3	10	4	6	58
Rabies:													99
Dog, Positive	3	9	8	12	5	9	5	4	---	---	2	2	59
Dog, Negative	2	1	3	1	2	4	2	4	5	---	4	2	30
Dog, Doubtful	---	---	2	1	2	2	1	---	1	---	---	1	10
Rat, Positive	---	2	---	---	---	---	---	---	---	---	---	---	2
Cat, Positive	---	---	---	---	---	1	1	1	---	---	2	---	5
Cat, Negative	---	---	1	---	---	---	---	---	---	1	1	---	3
Cat, Doubtful	---	---	---	---	---	---	---	---	---	---	---	---	1
Cow, Positive	---	---	---	1	---	---	---	---	---	---	---	---	1
Chicken, Doubtful	---	---	---	---	---	---	1	---	---	---	---	---	1
Human, Positive	---	---	---	---	---	---	---	1	1	1	---	---	3
Squirrel, Doubtful	---	---	---	---	---	---	---	---	---	---	---	---	1
Fox, Doubtful	---	---	---	---	---	---	---	---	---	1	---	---	1
Hog, Doubtful	---	---	---	---	---	---	---	---	---	1	2	---	2
Tuberculosis:													119
Positive	50	39	35	54	42	35	19	25	30	38	40	37	444
Negative	132	118	102	107	103	108	96	73	64	61	105	93	1192
Unsatisfactory	4	---	6	1	1	3	5	6	1	4	3	1	35
Typhoid:													1671
Positive	12	33	30	21	22	26	31	31	26	19	24	26	301
Negative	75	84	78	83	119	133	140	135	119	135	57	82	1240
Incomplete	5	6	7	10	16	19	11	8	14	6	5	7	114
Para-Typhoid, Negative	---	---	1	---	---	---	---	---	---	---	---	---	1
Urinalysis	1	5	10	7	9	2	8	8	12	9	11	9	91

STATEMENT OF SPECIMENS EXAMINED.—(Continued).

MATERIAL EXAMINED	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.	GRAND TOTAL
Water (For Sewerage Contamination)														
Positive			2		3			6			1	2	14	
Negative		5	28		8	12	6	10	10	7	1	4	91	
Doubtful				4		1					1		6	111
Miscellaneous:														
Animal Inoculation			4		3	1								
Autogenous Vaccine	1	3	2			2		3	2	1		3	11	11
Blood Count:														14
Differential	3	4	4	3	5	3	5	8	10	1	2	7	55	58
Plain		2	4	5	1	3	5				3		23	
Leprosy:														
Positive		1											1	
Negative			2			3	5						10	11
Ophthalmia:														
Positive				1			2		1	1	2		5	9
Negative													4	7
Spinal Fluid	1	1		1	1	1	2						7	
Spirochaete Pallida:														
Positive			1	1	1					3		1	7	
Negative				1			3						4	
Vincent's Angina							1		3		1	2	7	11
Unclassified	23	34	19	8	126	6	10	9	23	13	5	4	280	280
Totals	860	880	1020	873	1128	1173	1139	951	1237	2688	1488	1079	14516	14516

*All Epitheliomas and Carcinomas are classified under general heading carcinoma, which includes 3 Adeno Carcinoma, 2 Squamous celled carcinoma, 1 Basal celled Carcinoma, 1 Carcinoma of Liver, 1 Metastatic Carcinoma. 3 Epitheliomas, and 1 Rodent Ulcer.

†Under the general heading Sarcoma there is 1 Angio-sarcoma, 4 spindle celled sarcoma and 1 round celled Sarcoma.

§Included under miscellaneous unclassified is 1 Filaria, 1 Diazo, 1 Cholera, 2 Subtilis, 2 Pus Staphylococcus, 1 Synovial Fluid, 3 Glanders, 2 Pleural Fluid, 1 Abscess Fluid, 1 Seminal Fluid and 1 Erysipelas.

DISTRIBUTION OF COMMUNICABLE DISEASES AS DIAGNOSED BY THE LABORATORIES OF THE STATE BOARD OF HEALTH FOR THE YEAR 1913

Towns	Diph.	Malaria	Typhoid	Tuberc.	Rabies	Amoeba	Leprosy	Total
1 Alachua				5	2			7
2 Alton				1				1
3 Apalachicola	9		5	1				15
4 Arcadia	6	5	10	7				28
5 Archer	1		2					3
6 Auburndale					1			1
7 Bartow		2	3	7	2			14
8 Bellaire		1						1
9 Blythe			1	1				2
10 Blountstown				1				1
11 Boca Grande	1		1	1				3
12 Bonifay	2							2
13 Bowling Green					1			1
14 Boynton	2		1	1				4
15 Bradentown	4	2	2	1				9
16 Bradley Junction		1						1
17 Brewster			1					1
18 Bronson	1		1	1				3
19 Brooker			1	1				2
20 Brooksville				2				2
21 Bunnell			1					1
22 Bushnell			8	1				9
23 Campbellton			1					1
24 Caryville	1							1
25 Cedar Keys	1			3				4
26 Chattahoochee	1							1
27 Chipley				2				2
28 Christina	2			3				5
29 Citra				1				1
30 Clearwater		3	3	4				10
31 Cocoa		1	1	4	1			7
32 Coleman		1	1					2
33 Crescent City		8	1					9
34 Crystal River	2							2
35 Dade City		1	8	2				11
36 Daytona	2	4	13	6				25
37 DeFuniak Springs	22			1	2			25
38 DeLand		1		1				2
39 Delray	13		1	2				16
40 Dinsmore					1			1
41 Dowling Park			4					4
42 Dunnellon		1						1
43 Emporia				4				4
44 Eustis	2			1				3
45 Fellsmere				1				1
46 Fernandina	7		1	1				9
47 Floral City	1	2						3
48 Freeport	1							1
49 Frostproof					1			1
50 Fort Dade			1					1

DISTRIBUTION OF COMMUNICABLE DISEASES—(Continued).

Towns	Diph.	Malaria	Typhoid	Tuberc	Rabies	Amoeba	Leprosy	Total
51 Fort Green			1					1
52 Fort Meade		1	1	4	2			8
53 Fort Myers		1	4	5				10
54 Fort Ogden	1							1
55 Fort Pierce	1	1		7				9
56 Fort White	1			1				2
57 Gainesville	26	7	9	18	7			67
58 Gothe			1					1
59 Grandin			1					1
60 Green Cove Springs	1		6					7
61 Greensboro		1	1					2
62 Greenville	1	1	1					3
63 Greenwood			1					1
64 Hampton	1	1		2				4
65 Hawthorne		1	1					2
66 Hawks Park				1				1
67 Hernando				1				1
68 Hilliard			1					1
69 Holder			1					1
70 Holt			3					3
71 Hosford		1	1					2
72 Hudson				1				1
73 Inverness			1					1
74 Jacksonville	189	151	86	182	34		1	643
75 South Jacksonville	1		2	2				5
76 Jasper					2			2
77 Jennings					1			1
78 Kathleen		1		1	1			3
79 Key West			1	6				7
80 Kissimmee				4				4
81 Lake Butler	4	2	14	1				21
82 Lake City		1	2	1				4
83 Lake Worth	3							3
84 Lakeland	14	6	9	4	1			34
85 Leesburg		1	2	4				7
86 Lemon City				3				3
87 Limestone					1			1
88 Live Oak	3		5	1				9
89 Lloyd				1				1
90 Loughman		1	1					2
91 Lulu			2					2
92 Madison	1							1
93 Manatee	4			2				6
94 Mandarin		1		1				2
95 Marianna	32		1	1				34
96 Mayo			1	1				2
97 Macclenny				1				1
98 Miami	2		2	5				9
99 Micanopy		2	2					4
100 Miccosukee		1						1
101 Milton	3		5	2				10
102 Millvale	4			1				5
103 Morriston	1		2					3

DISTRIBUTION OF COMMUNICABLE DISEASES—(Continued).

Towns	Diph.	Malaria	Typhoid	Tuberc.	Rabies	Amoeba	Leprosy	Total
104 Monticello				2				2
105 Mulberry	1			3	1			5
106 Myrtle			1					1
107 Newberry			1	2	1			4
108 New Smyrna	1			3				4
109 Ocala	5	5	7	4				21
110 Orlando	4	13	16	32				65
111 Otter Creek		1	2					3
112 Ozone		2						2
113 Palatka	1	1		13				15
114 Palmetto	5	1		2				8
115 Panama City	1							1
116 Parrish					1			1
117 Pensacola	35	41	17	94		7	1	195
118 Pine Mount			1					1
119 Plant City	18	14	21	11	1			65
120 Port Inglis			1					1
121 Fort McCoy			1					1
122 Port Orange				2				2
123 Port St. Joe				1				1
124 Punta Gorda			2	1				3
125 Quincy	2	1		3				6
126 Raiford			2					2
127 River Junction	1							1
128 Safety Harbor			1					1
129 San Antonio			1					1
130 Sanford	12	2	3	1				18
131 Sarasota	2		1	4				7
132 Starke	1	2	4		1			8
133 St. Andrews Bay						1		1
134 St. Augustine	8	3	1	4				16
135 St. Petersburg	2		1	6				9
136 Tallahassee	47	14	26	17	1			105
137 Tampa	204	176	195	220	10	11	1	817
138 Port Tampa	1		1	3				5
139 West Tampa	2			3				5
140 Tarpon Springs				1				1
141 Tiger Bay					1			1
142 Titusville	1	14	3	1				19
143 Trenton			1		1			2
144 Trilby				1				1
145 Umatilla			1					1
146 Wauchula	2		10	4				16
147 Webster				1				1
148 Welaka				1				1
149 West Palm Beach	5		1	4				10
150 Wewahitchka				1				1
151 Wilcox					1			1
152 Wildwood	1	1						2
153 Williston	2							2
154 Winterhaven	1							1
155 Worthington			1	2				3
Totals	739	506	566	777	80	19	3	2690

COMPARATIVE STATEMENT OF THE SIX PRINCIPAL DISEASES
FOR WHICH EXAMINATIONS HAVE BEEN MADE IN THE
THREE LABORATORIES FROM 1910 TO 1913.

	Jacksonville	Tampa	Pensacola	Total
Diphtheria:				
1910: Total Examinations---	389	147	22	568
Positive Examinations	113	35	13	161
1911: Total Examinations---	389	344	99	832
Positive Examinations	111	75	23	209
1912: Total Examinations---	890	649	113	1652
Positive Examinations	310	223	38	571
1913: Total Examinations---	4224	1075	680	5979
Positive Examinations	694	303	107	1104
	5902	1228	914	8044
Malaria:				
1910: Total Examinations---	1540	935	54	2529
Positive Examinations	307	309	8	624
1911: Total Examinations---	1631	3361	232	5224
Positive Examinations	151	1086	29	1266
1912: Total Examinations---	2058	2804	290	5152
Positive Examinations	318	592	22	932
1913: Total Examinations---	2329	2901	377	5607
Positive Examinations	256	203	42	501
	7558	1032	683	9273
Typhoid:				
1910: Total Examinations---	1484	440	14	1938
Positive Examinations	439	100	3	542
1911: Total Examinations---	1305	1571	199	3075
Positive Examinations	278	288	60	626
1912: Total Examinations---	1433	1339	188	2960
Positive Examinations	207	234	49	490
1913: Total Examinations---	1655	1494	241	3390
Positive Examinations	301	267	36	604
	5877	4844	522	11243
Tuberculosis:				
1910: Total Examinations---	1059	425	31	1515
Positive Examinations	254	126	5	385
1911: Total Examinations---	1134	874	233	2241
Positive Examinations	292	253	67	612
1912: Total Examinations---	1325	790	311	2426
Positive Examinations	338	185	85	608
1913: Total Examinations---	1671	897	396	2964
Positive Examinations	444	264	108	816
	5189	2986	745	8920

COMPARATIVE STATEMENT OF THE SIX PRINCIPAL
DISEASES—(Continued).

	Jacksonville	Tampa	Pensacola	Total
Gonorrhoea:				
1910: Total Examinations---	420	156	29	605
Positive Examinations	174	69	12	255
1911: Total Examinations---	432	283	120	835
Positive Examinations	144	144	52	340
1912: Total Examinations---	399	286	221	906
Positive Examinations	162	122	97	381
1913: Total Examinations---	437	422	410	1269
Positive Examinations	183	152	127	462
	1688	1147	880	3715
Hookworm:				
1910: Total Examinations---	6226	999	183	7408
Positive Examinations	3578	474	90	4142
1911: Total Examinations---	4078	1091	760	5929
Positive Examinations	2303	409	250	2962
1912: Total Examinations---	3064	691	1239	4994
Positive Examinations	1533	205	766	2504
1913: Total Examinations---	2343	1105	370	3818
Positive Examinations	914	239	123	1276
	15711	3886	2552	22149

TABULATION OF PATRONAGE.

The following is a list of towns which have submitted specimens to the Central Laboratory for examination, and the total number for each town for the year 1913:

Towns	No. Submitted	Towns	No. Submitted
Alachua	29	Citra	5
Altha	11	Clarksville	6
Alton	8	Clearwater	13
Alva	1	Clermont	2
Apalachicola	80	Cocoa	34
Apopka	20	Coleman	13
Arcadia	98	Cottondale	2
Archer	40	Crawfordsville	1
Atlantic Beach	4	Crescent City	86
Aucilla	1	Crystal River	9
Aycock	1	Dade City	17
Baldwin	3	Daytona	144
Bartow	111	Deerfield	1
Bassinger	5	DeFuniak Springs	96
Bellaire	1	DeLand	41
Bellevue	5	Delray	99
Blichton	7	Dinsmore	4
Blountstown	2	Dowling Park	14
Boca Grande	4	Duncan	1
Bonifay	8	Dunedin	1
Bowling Green	26	Dunnellon	18
Boynton	21	Eau Gallie	3
Bradentown	77	Emerelda	9
Bradley Junction	9	Emporia	6
Branford	5	Enterprise	2
Brooksville	33	Eureka	1
Bronson	34	Eustis	17
Brooker	9	Fairfield	1
Bunnell	13	Favoretta	1
Bushnell	31	Fellsmere	12
Calloosa	1	Fernandina	82
Campville	8	Floral City	3
Camp Walton	1	Freeport	7
Captiva	2	Frostproof	1
Carrabelle	11	Fruitland	3
Cedar Keys	27	Fort Green	2
Center Hill	6	Fort Lauderdale	3
Chattahoochee	3	Fort McCoy	3
Chicora	5	Fort Meade	23
Chipley	8	Fort Myers	12
Christina	10	Fort Ogden	2

Towns	No. Submitted	Towns	No. Submitted
Fort Pierce	66	Levon	1
Fort White	3	Limestone	2
Gainesville	462	Live Oak	146
Gaiter	4	Lulu	19
Georgiana	2	Lloyd	5
Glendale	1	Loughman	8
Grandin	3	Madison	6
Grand Crossing	1	Maitland	4
Grand Ridge	1	Malone	2
Green Cove Springs	77	Manatee	15
Greensboro	39	Mandarin	27
Gretna	13	Manville	1
Greenville	19	Marianna	126
Greenwood	3	Mayo	6
Groveland	3	Mayport	6
Haines City	2	Macclenny	3
Hallandale	9	McIntosh	9
Hampton	18	Melbourne	12
Haskell	3	Melrose	4
Havanna	3	Meredith	1
Hawthorne	20	Miami	51
Hawks Park	4	Micanopy	61
Hernando	2	Miccosukee	2
High Springs	2	Monticello	15
Hilliard	5	Morrison	7
Hinson	1	Mulberry	26
Holder	11	Murphy	1
Holmestead	1	Myrtle	4
Immokalee	1	Narrows	1
Interlachen	2	Newberry	18
Inverness	19	New Smyrna	63
Jacksonville	7886	Oakland	8
Jasper	10	O'Brien	8
Jennings	3	Ocala	200
Jupiter	1	Okahumpka	2
Kathleen	11	Okeechobee	18
Key West	55	Oklawaha	17
Kissimmee	49	Ona	11
Kuhlman	2	Ozona	6
Lady Lake	2	Orlando	555
Lake Butler	103	Orange Lake	3
Lake City	31	Otter Creek	31
Lake Como	1	Olustee	2
Lake Worth	10	Oviedo	14
Lakeland	43	Oxford	4
Largo	31	Palatka	46
Lawtey	2	Palmetto	31
Leesburg	55	Panama City	2
Lemon City	9	Parish	1

<i>Towns</i>	<i>No. Submitted</i>	<i>Towns</i>	<i>No. Submitted</i>
Pensacola	5	Sumatra	1
Perry	9	Summerfield	2
Pierce	1	St. Andrews	3
Pierson	5	St. Augustine	117
Pine Mount	4	St. Petersburg	66
Plant City	115	Tallahassee	863
Ponce DeLeon	3	Tampa	7
Port Inglis	7	Tarpon Springs	1
Port Orange	16	Tiger Bay	4
Port St. Joe	1	Titusville	159
Punta Gorda	5	Trenton	6
Quincy	60	Trilby	1
Raiford	10	Umatilla	14
River Junction	3	Viking	1
Rodman	2	Wabasso	1
Romeo	1	Wauchula	75
Ruskin	17	Webster	14
San Antonio	21	Welaka	9
Sanford	167	Wellborn	14
Sarasota	67	West Palm Beach	55
Sea Breeze	4	Wewahitchka	1
Sebring	2	White Springs	19
Sebastian	3	Wilcox	1
Seville	2	Wildwood	36
Sharpes	6	Williston	55
Shiloh	3	Winter Haven	16
Sneads	3	Worthington	14
South Jacksonville	27	Youngstown	2
Starke	68		

REPORT OF DR. G. H. SIMON

BACTERIOLOGIST, TAMPA LABORATORY.

Tampa, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—In submitting my annual report for the Tampa Laboratory, I have little to say regarding the work done during the year just past. The tabulated report submitted clearly sets forth what was accomplished during the year of 1913.

There were examined during the past year eight thousand, seven hundred and thirty-five specimens, fifteen hundred and fifty more than during the year of 1912. This large number of examinations frequently taxed the capacity of the laboratory diagnosticians to the utmost, especially when it is remembered that in work of this kind the preparation of large quantities and varieties of media, stains, etc., is required. However, the authorization by the State Board of Health of the appointment of a Sanitary Patrolman who was to devote his spare time to laboratory duties, has been of great benefit. Mr. Charles De Armas, who has been appointed to that position, has shown considerable ability in making examinations for intestinal parasites, preparation of media, stains, etc., and has rendered valuable assistance in the laboratory since his appointment, six months ago.

One striking feature of the report submitted is the large percentage of specimens for examination that were received from Tampa. Of the eight thousand, seven hundred and thirty-five examined, seven thousand, nine hundred and ten, or ninety per cent. came from Tampa.

The physicians of this community fully appreciate the importance of laboratory diagnosis, and avail themselves of the advantages as offered them by the local laboratory of the State Board of Health.

Each member of the laboratory force, I believe, has endeavored during the past year to render the best of service, endeavoring thereby to make this institution a credit to the State of Florida. I desire at this time to make certain recommendations for the coming year, and to make certain suggestions that I believe will aid in keeping up the efficiency of this institution.

First. The duties of the stenographer have, during the past year, been greatly increased, due not only to the increased amount of work that has occurred in the laboratory, but also on account of the additional duties imposed upon Dr. C. W. Bartlett, recently appointed Assistant to the State Health Officer for this part of Florida, whose stenographic and clerical work is also done by the laboratory stenographer. In view of the above facts, I would respectfully recommend that the salary of the stenographer, Miss Valdespino, be increased from \$50.00 to \$65.00 per month.

Second. We find it necessary to keep on hand larger quantities and varieties of media than in the past, and have found that our refrigerator is not large enough to meet our present demands. I would, therefore, recommend that authority be given to dispose of the refrigerator on hand at present, and that one large enough for our present needs be obtained.

Third. The gas heater used for heating water, for cleansing glassware, etc., which was installed almost four years ago, when the building was erected, is no longer in condition to use, and the Tampa Gas Company has advised us that it would be impossible to place the same in satisfactory condition.

I would, therefore, recommend that a suitable heater be provided at an early date, as it is well nigh impossible to get along without one.

Fourth. Last, but by no means least, as custodian of the building, I wish to call attention to the general condition of the laboratory building. It will be necessary in the near future to paint the walls, ceilings and woodwork of the interior of the building, as well as the doors, door and window frames, and cornices on the exterior of the building, to save the structure from deterioration, and to improve its general appearance.

Respectfully submitted,

G. H. SIMON, M. D.,

Bacteriologist in Charge of Tampa Laboratory.

STATEMENT OF SPECIMENS EXAMINED IN THE TAMPA
LABORATORY DURING 1913.

Material Examined	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Animal Parasites:														
Hookworms:														
Positive	20	24	24	18	18	12	29	17	17	22	16	22	239	
Negative	54	56	49	58	69	62	74	91	93	97	72	82	857	
Unfit	3		2			1	2		1				9	
Amoeba:														
Positive		1	1		1	3	1	2	1	2	2	3	17	
Negative	12	10	5	10	2	7	12	10	15	9	14	17	123	
Ascaris	2	3	6	5	11	8	10	12	13	40	10	12	132	
Lambliia Intest.		1	1	3	3	1	6	2	6	3	2	1	29	
Oxyuris Vermic		1	1	1	1					1	4	2	11	
Taenia:														
Positive	1		1				1	5	4	3	2		17	
Negative			1										1	
Trichiuris	3	5	6	14	7	10	12	17	17	47	25	30	193	
Strongyloides		1		1								1	3	1631
Diphtheria:														
Cultures:														
Positive	34	29	5	9	22	4	9	20	46	44	43	38	303	
Negative	122	41	64	44	53	32	24	19	95	71	99	74	738	
Doubtful	6	1		1	2	1	1	3	2	4	5	8	34	1075
Gonorrhea:														
Positive	12	7	13	9	8	7	13	27	14	14	16	12	152	
Negative	27	17	25	13	16	14	26	24	30	16	15	22	247	
Doubtful	4	3		1	2	1	2	1		2	5	4	25	422
Malaria:														
Positive	10	17	16	7	11	18	31	14	22	31	18	8	203	
Negative	272	231	224	224	217	206	233	192	242	209	229	193	2672	
Doubtful	7					3	4	2		5	2	3	26	2901
Pathological Specimens:														
Malignant	2	5		10	2		1	3	3	2	1	4	33	
Non-Malignant	5	7	1	9	5	1	5	2	2	5	4	3	49	82
Rabies:														
Dogs:														
Positive	1	3	3	5	1			1					14	
Negative	4	1	1	1			2				2		11	25
Others:														
Positive		1				1							2	
Negative	2	1	1									1	5	7
Tuberculosis:														
Positive	26	10	20	16	30	26	25	22	30	21	22	16	264	
Negative	57	47	59	57	47	52	62	44	51	63	47	47	633	897
Typhoid:														
Positive	52	41	35	25	13	11	9	14	9	14	22	22	267	
Negative	118	105	103	106	93	100	101	75	83	70	76	63	1093	
Inc.	27	12	10	15	10	13	8	8	12	7	9	3	134	1494
Animal Inoculation	2	1	1				2					3	9	9

REPORT OF TAMPA LABORATORY.—(Continued).

Material Examined	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Water (for sewage con- tamination:														
Positive									1			1	2	
Negative									7	2			9	11
Blood Counts:														
Diff.	3	1	1	1		4		3	4	1	1	19		
Plain	7	2	5	3		3	2	3	2	3	2	32	51	
Leprosy:														
Positive				1									1	
Negative	2	3											5	6
Ophthalmia:														
Positive			1			1	2						4	
Negative	1		1		2		2	2	6	6	6		26	30
Urine	1			6	2		5	1	1	1			17	17
Cultures from Pus Speci- mens	1			3	6	4	7	6	2	11	5	2	47	47
Diazo Reaction:														
Positive	1			1	1	1	2	2	1		1		10	
Negative						2	1	1		2			6	16
Bacillus Pestis:														
Negative	1												1	1
Menningococcus:														
Doubtful	1												1	
Negative				2			1						3	4
Tetanus:														
Negative				1									1	1
Spirocheta Pallida:														
Negative					1						1		2	2
Filaria:														
Negative						1		1		1			3	3
Paratyphoid:														
Negative						1							1	1
Vincent's Angina:														
Negative										1			1	1
Taenia Echinococcus:														
Positive											1	0	1	1
Total by months	903	688	686	680	656	607	731	640	832	832	780	700		8735

STATE BOARD OF HEALTH OF FLORIDA

TABLE OF SPECIMENS EXAMINED SHOWING NUMBER RECEIVED FROM VARIOUS TOWNS OF THE STATE, DURING 1913. LABORATORY STATE BOARD OF HEALTH, TAMPA, FLA.

Tampa	7910	Brought forward	8702
Lakeland	177	Dunnellon	2
Plant City	166	Belleair	2
St. Petersburg	64	Valrico	2
Clearwater	61	Kissimmee	2
Fort Myers	47	Zephyrhills	2
Palmetto	40	Tarpon Springs	2
Bartow	34	Hudson	2
Bradentown	29	Punta Gorda	2
Wauchula	29	Leesburg	2
Largo	21	Titusville	1
Arcadia	20	Mulberry	1
Sarasota	20	Palatka	1
Manatee	14	Lake Wales	1
Dade City	11	Fort Dade	1
Floral City	10	Pinellas Park	1
Brooksville	8	Fort Ogden	1
Winter Haven	6	Wimauma	1
Ruskin	6	Archer	1
Fort Meade	5	Jacksonville	1
Kathleen	5	Centralia	1
Boca Grande	5	Parrish	1
Umatilla	4	Sydney	1
Brewster	4	Auburndale	1
Bowling Green	3	Pass-a-grille	1
Safety Harbor	3		
Carried forward	8702	Total	8735

REPORT OF DR. F. A. BRINK

BACTERIOLOGIST PENSACOLA LABORATORY

Pensacola, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR: I have the pleasure of handing you a report of work done in the Pensacola laboratory during the year just closed.

The first thing to be noted is the steady increase of work being sent to this laboratory. Last year there were examined 3,852 specimens, an increase of 963 over 1912.

A large portion of the work was examination of diphtheria specimens, and while a great many were negative, there were a few persons who had the disease and carried the disease germs in their throats for long periods after they were apparently well. It is in such instances that the laboratory seems to be of singular usefulness, and the promptness with which the various small outbreaks were gotten under control indicates efficiency on the part of those doing the field work.

The city of Pensacola, it seems to the writer, has been singularly free from acute infectious diseases such as come to the notice of a laboratory worker. There were a few cases of diphtheria, a few of typhoid and a few of malaria, but at no time could it be said that any of these diseases was prevalent.

The number of hookworm examinations fell off very materially, obviously because payment for treatment was withheld by the Board.

Tuberculosis specimens have increased in number about in proportion to the increase in the total number of specimens.

Examination of rats for B. Pestis was left off in June, there seemed to be no urgent need to continue it and the manner of obtaining specimens did not provide them from along the water front. It is of interest that out of about 1,600 rats brought to the lab-

oratory there were no less than fourteen that were infected with rat leprosy, part of these were examined in 1912 and part in 1913.

Early last year we began doing pathological tissue work at this laboratory and 22 specimens were examined with results as satisfactory as one could expect with the specimens that were sent in. Two were unsatisfactory on account of not being well preserved.

Respectfully yours,

F. A. BRINK,
Bacteriologist.

PENSACOLA LABORATORY,
REPORT OF SPECIMENS EXAMINED.

1913.

Specimen	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Animal Parasites:														
Hookworm:														
Positive	9	10	11	8	8	28	13	10	12	4	3	7	123	
Negative	10	12	19	13	20	38	29	30	28	16	14	18	247	
Amoeba Coli:														
Positive			3	4	16	2		1	2			1	29	
Negative			1	1	6	5		2	2			2	19	
Doubtful					1		1						2	
Lamblia Intest.	1				2					1			4	
Ascaris Lumbri.	1	1								1			2	
Oxyuris Vermi.			1										2	
Strongyloides Int.					1	4		1					2	
Tapeworms	1		5		1	1	3	2	1	1	1	4	14	
Trichocephalus Dispar		3		2	1	4	4		4	1		1	20	482
Diphtheria:														
Swabs:														
Positive	13	8		1	2		2	4	24	10	3		67	
Negative	24	17	1	3	6	3	10	13	91	120	38		326	
Doubtful								3	16	9	4	1	33	
Cultures:														
Positive	20	10	1	1	2		2	6	32	21	9	3	107	
Negative	18	17		3	6	3	10	14	152	121	42	177	563	
Doubtful								9	1				10	1106
Gonorrhea:														
Positive	6	6	15	11	9	8	17	12	10	6	16	11	127	
Negative	8	26	22	38	27	28	21	16	20	17	24	24	276	
Doubtful Unfit				1	1	2	1		1				7	410
Malaria:														
Positive		7	4	5	2	3	5	3	6	5	1	1	42	
Negative	15	18	24	20	15	28	46	51	38	36	19	24	334	
Unsatisfactory								1					1	377
Pathological:														
Malignant				2	1	1		1	2	2			9	
Non-malignant	1	1	1	1		1		2	1	1	1		10	
Unsatisfactory								2	1				3	22
Rabies:														
Dog:														
Positive			1										1	
Negative						1							1	2
Tuberculosis:														
Positive	9	4	10	13	14	11	13	8	8	6	7	5	108	
Negative	23	11	36	29	28	26	26	23	25	22	16	23	283	396
Typhoid:														
Positive	4	6	3	3	1	1	11	3	1	1	2		36	
Negative	9	8	10	9	8	13	29	38	27	21	12	13	197	
Inc.				1	1	1	1	1	1	3			8	241

REPORT OF PENSACOLA LABORATORY.—(Continued.)

Specimen	January	February	March	April	May	June	July	August	September	October	November	December	Total	Grand Total
Water Contamination:														
Positive						1	1						2	
Negative	2	1		2		1		3		1			10	12
Blood Counts:														
Plain	1	2	4	9		1	1	1		1	1		21	
Diff.		1	1	4		4	4	10	10	1	1		36	57
Urinary Analysis	13	8	9	5	4	8	12	9	14	19	11	6	118	118
Rat Plague:														
Negative	24	26	33	3	7	9							102	102
Rat Leprosy:														
Positive	1	2		1	1	1							6	6
Milk Examinations	5	5	11	8	14	38	65	63	64	85	65	62	485	485
Other Misc. Examinations	3	1	2	9	2	1	1	5	5	3	2	2	36	36
Total, 1913	221	211	228	209	208	277	328	337	610	540	298	385	3852	
1912	149	126	141	126	208	337	358	442	316	250	222	214	2889	
1911	185	157	163	141	151	146	128	147	166	141	132	131	1787	

VETERINARY DIVISION

REPORTS OF

DR. CHARLES F. DAWSON, VETERINARIAN; DR. W. A.
MUNSELL, ASSISTANT VETERINARIAN; DR. J. W. DEMILLY,
ASSISTANT VETERINARIAN.

HOG CHOLERA.

What is true of every other State regarding some diseases, is true of Florida also: i. e., that hog cholera is our most important swine disease. The hog is the farmer's meat supply to a very large extent. He is the most prolific farm animal, matures earliest, is easy to raise, forages for himself, and produces more weight for the size of his skeleton than any other animal. Every part of the hog, except his grunt, is available in some way for man's use. The hog is receiving as much attention today from breeders as any other animal. He is being bred along almost all conceivable lines to produce this and that excellence. So it may be said the hog is the most important food-producing animal on the farm. This being the case, the diseases to which he is heir assume a corresponding importance. The greatest of these is, as everybody knows, hog cholera. The number of hogs lost annually in the United States from this disease is almost incalculable—the loss can only be estimated. Of this loss, Florida has sustained her quota, since the advent of the disease in this State, in 1840.

Florida may have a million hogs. It is entirely possible that one-tenth of these die of cholera. The average price of our common piney-woods "rooter" is from three to five dollars. Hence, with a ten per cent. loss, Florida may lose \$300,000.00 to \$500,000.00 worth of hogs annually. In other States where higher-bred hogs are worth more, and where it costs more to produce them, the losses run into the millions of dollars. As a matter of fact, it is highly probable that the loss to farmers in hogs exceeds that in all other farm animals combined in the whole United States. How important it is, then, that scientists should strive to find some cheap and effective method of combatting the disease which causes these untold losses. It is of the utmost importance that a method for entirely eradicating the disease be put into operation. It can be done. There is absolutely no excuse for the existence of hog cholera, because we now have a method of *double-vaccination*, which renders the hog absolutely immune to the disease. It is only a question of money and men. The use of a single serum treatment is only a make-shift as judged from a scientific standpoint; it does not accomplish anything at all in the eradication of the disease, merely saving some of the hogs from death from hog cholera. The dou-

Jacksonville, Fla., January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR: I have the honor to present the Annual Report of the Veterinary Division for the year 1913, which also includes the annual reports of Assistant Veterinarians W. A. Munsell and J. W. DeMilly.

The activities of the Veterinary Division have greatly increased during the year in all lines of work coming under its care. The most important subjects demanding increased attention have been the educational campaign upon tick eradication, hog cholera, and glanders, all of which is reflected in the special reports upon these subjects.

During the year, it was found advisable to increase the personnel of the division by the appointment of another veterinarian, and Dr. W. A. Munsell, of Green Cove Springs, a graduate of the Agricultural College of the University of Florida, and of the Veterinary Department of Cornell University, was selected to fill this important position.

Dr. Munsell's work, in every detail he has been directed to execute, has shown him a thoroughly capable man, and the State at large, and the Board of Health in particular, were fortunate in securing the services of a man so well qualified to perform the various duties of the position.

Dr. J. W. DeMilly, who for two years had filled the position of demonstrator in the administration of hog cholera serum, resigned, in October, to attend a veterinary college in order to better himself for his life's work. He is to be commended for this act, and it is hoped that he will receive that encouragement that is due all aspiring young men.

In submitting this report, I wish to avail myself of the opportunity, here presented, to thank you for the many evidences of good will shown by you to me and toward my department.

Respectfully submitted,

CHARLES F. DAWSON, M. D., D. V. S.,
Veterinarian.

ble vaccination, i. e., the simultaneous injection of the serum and of the *virus* of hog cholera, will absolutely prevent the treated animal from contracting the disease, and if every animal were so treated, it is easy to see that hog cholera would immediately cease to exist on the face of the earth. The method has been worked out; it has been proven by thousands of experiments and no more experimenting is needed excepting the cheapening of the method of serum production, and the identification of the germ of hog cholera. Until this germ has been identified we shall be compelled to use the serum and virus for protection against the disease. The practical man and hog owner can use this method while the scientist is trying to discover the cause of the disease. This done, we may expect a new and cheaper method of protecting the hog from cholera.

In my annual report for 1912, I reported the results of an experiment made under your direction and authority, in which it was fairly well shown that buzzards *do not* carry the germ of hog cholera in their droppings; and commented upon the fact that our experiments did not prove that the hog cholera virus is not carried in the vomit of buzzards and upon their feet and feathers. I promised to make experiments to determine these points, but as the facilities for such work, projected at that time, have not, for various reasons, been provided, these promises have not been carried out. Work of this kind can not be left to the care of persons who can have no particular interest in it. It must be done under the eye of the experimenter who must see his experimental animals several times a day; and this means the work must be done at the laboratory, and not at some distant point.

FREE SERUM DISTRIBUTION.

During the past year, serum has, as required by law, been distributed free of charge, even transportation costs being prepaid, to all who properly applied for it. While the law requires the Board to send the serum free of all costs, it very properly allows the Board to make such rules governing its distribution as it deems necessary. These rules were adopted for the purpose of ultimately ascertaining the results of the use of the serum; because if the serum were doing no good, it is evident that the Board should recommend abandoning its use, and stop a considerable drain upon the financial

resources of the State. In order to determine this point, the following circular letter of inquiry was sent to every agent and owner who had received serum, about five hundred in number:

Jacksonville, Fla., November 19, 1913.

To All Persons who Have Used Hog Cholera Serum Furnished by the State Board of Health in 1913:

Dear Sir:—

Your name appears on the records of this office as one who has been furnished free hog cholera serum.

It is desirable to know, in a general way, whether the serum has been a valuable means for checking the spread of hog cholera and whether the State is warranted in continuing its free distribution.

You are, therefore, respectfully requested to reply to the following questions, giving your answer as correctly and briefly as possible. Stamped envelope is enclosed for reply.

Yours respectfully,

JOSEPH Y. PORTER, M. D.,
State Health Officer.

QUESTIONS.

1. State the number of hogs you treated -----
2. What was their estimated value? -----
3. How many were sick when treated? -----
4. How many were well when treated? -----
5. How many had died before treatment was applied? -----
6. How many died after treatment? -----
7. Were there any bad effects from treatment, such as swellings? -----
8. How long had you kept serum on hand which gave bad results? -----
9. Do you think any hogs died as a result of the treatment? -----
10. What is the general opinion of the owners as to the value of the treatment? -----
11. What is your opinion as to the value of the treatment? -----
12. Are you an Agent or simply the owner of the hogs you are giving answers about? -----
13. If an Agent, have you provided yourself with a syringe and do you wish to retain your agency? Give your postoffice and express office address -----
14. What is your occupation? -----

It had been anticipated, on account of the serum being put into the hands of persons not experienced in such matters, that a large number of the reports would be unfavorable. To our surprise, however, at least 95 per cent of the answers were favorable, some

owners going so far as to write long testimonials as to its efficiency when these were not asked for or desired.

The following memorial is of interest at this point:

MEMORIAL.

United States Live Stock
Sanitary Association.

Chicago, August 20, 1913.

To the Members of the American Veterinary Medical Association, in Convention Assembled.

Gentlemen:—

As the result of much study and observation in connection with the slaughter of large numbers of hogs at packing houses under United States Government Inspection we deem the following observations of timely importance to the members of your Association and of even greater interest to the Farmers and Stockmen whom you serve.

We recognize the Niles-Dorset Serum for the treatment of Hog Cholera as the most valuable agent now employed for this purpose. We recognize that in the hands of competent veterinarians this Serum may be safely administered and prove of great value. We also believe that in the hands of the average Farmer and unskilled operator, the use of this Serum may cause serious damage to portions of hog carcasses. We believe that improper Serum, the use of dirty syringes accompanied by general unsanitary conditions after treatment will result in serious damage.

As the proper area for inoculation is still an open question, we wish to suggest that some place other than the ham be properly designated as suitable for the purpose. There is a probability of ham inoculation abscesses not discoverable until the ham is sliced for use.

So serious has the situation become, that one packing firm has undertaken a series of comparative experiments, in which groups of live hogs are being vaccinated in the Neck, Shoulder, Flank and Ham. These groups will be kept separate, slaughtered separately and injury to the carcasses carefully compared by United States Government Inspectors.

We wish to bring this matter strongly before the attention of the American Veterinary Medical Association, with a recommendation that the matter be investigated and, if possible, some action taken to check this preventable damage.

In our opinion Serum should be used only by competent Veterinarians. The use of Serum by farmers and incompetent laymen should be discouraged as far as possible.

Respectfully submitted,

J. J. FERGUSON,
Secretary and Treasurer.

Serum has cost Florida more than \$10,000.00 this year, as against about \$15,000.00 in 1912. The difference in the amounts distributed was caused largely by our inability to supply the demand at a time when it was greatest all over the United States, and to our having adopted more careful methods of distribution. It was found advisable to discontinue the practice of allowing per-

sons to accumulate serum on hand for so-called emergencies. Many hogs were killed by their owners using old serum which had become putrid, and it became necessary, in order to protect the owner against himself, and often against his will, to send him enough only to treat such hogs as he had at hand; and this necessitated the strict adherence to the rule of requiring that all serum must be applied for on our official application blank.

As the Board could not even attempt to keep enough veterinarians in the field to respond to all calls for help in treatment of hogs, the plan of appointing local agents who had been instructed was adopted. There are now about one hundred and seventy-five of these local agents, scattered in the various counties, and when an owner applies for serum, he is directed to employ one of these agents to do the work for him, if he is not equipped to do it for himself. A list of these agents will be found at the end of this article.

Even with this unusual liberality on the part of the State, there are some who are disposed to grumble. While it does seem hard for a poor farmer to lose his hogs from a cause against which he is powerless, yet I believe that the general rule that the most deserving and those least able to stand the loss, get the least help, because they, as a general thing, take less trouble to keep up with the advances of the times. Many of the owners receiving large amounts of serum, which has cost the State twenty dollars a quart, were amply able to pay for it. In some instances, they ordered more than they needed, and when their reports showed they had not used it all, they were in many instances directed to destroy it, as it had aged and would have been dangerous for others' hogs. There are now, on my desk, three bottles of such serum, which cost the State \$17.50.

If the State Board of Health were, by this comparatively large expenditure, eradicating hog cholera from Florida, we should probably view it as money well and wisely spent. *It is a State's duty to PREVENT diseases; but it is a debatable question as to its being a State's duty to CURE diseases.* For all the money expended on hog cholera, so far, the disease has not lessened one iota either in Florida or the United States. Many hogs have undoubtedly been saved to the owners, but the disease is as wide-spread as ever, and

will remain so, and even increase, unless the principle of double treatment is resorted to in *every pig that is born*.

It will do little good, upon the whole, to double-vaccinate a drove here and there. In fact, it will make matters worse; because the hogs of the man who does not double-vaccinate or treat with the single serum method, will catch the disease from his neighbor's hogs that have been double-vaccinated, as it is now believed that the double-vaccinated hog, while not visibly sick himself, is passing the introduced hog-cholera germ from his body and infecting other untreated hogs. He is a "carrier" of disease. As a matter of fact, this may explain the apparent increase in hog cholera in the middle west last year, where double-vaccination is being practiced. It is fine for the fellow who uses the method, but very dangerous for his neighbor who has done nothing to ward off cholera. It, therefore, seems advisable to quarantine such vaccinated hogs for 30 days as a matter of protection for the other fellow.

In conclusion, Florida and Illinois are the only States that are furnishing hog-cholera serum free. The serum costs from \$15.00 to \$20.00 a quart, according to the prices of different makers. Many States produce their own serum and sell it to its citizens at cost price, which is about \$15.00 a quart. The following financial statement shows it cost Michigan about \$13.33 per quart to make the serum:

FINANCIAL REPORT ON HOG CHOLERA SERUM MANUFACTURE,
JULY 1ST, 1912-JULY 1ST, 1913.

Feed, concentrated	\$ 685.58
Hay, straw and roughage	148.43
Swine	4,930.54
Labor	3,500.00
Travel	5.33
Apparatus and sundry items	61.59

\$9,331.47

SERUM.

Total No. cc on hand good, July 1st, 1912	216,070
Total No. cc. on hand not tested, July 1st, 1912	47,745
Total No. cc. on hand experimental	32,860
Total No. cc. drawn and mixed during year	362,380
Total No. cc. not mixed, on hand July 1st, 1913	12,005

Total No. cc. 671,060

It would cost Florida more than this to make her own serum, as the Michigan figures do not include charges for buildings and rent of necessary land.

In order to lessen correspondence, and answer the many questions asked by correspondents, the following circular of information entitled "Facts About Hog Cholera Serum and Its Distribution," was printed for distribution.

FACTS ABOUT HOG CHOLERA SERUM AND ITS DISTRIBUTION.
READ CAREFULLY.

The serum does not cause hog cholera.

It does not cure hog cholera. It may exert some slight curative effect, but must be used in doses that are so large as to make it unprofitable to use. The State Board of Health will not supply serum for such use, nor does it supply virus at present.

To get the best results, serum must be used as soon as cholera appears in the drove.

If only small pigs and shoats are sick it is not cholera, but lung worm disease, and the serum will do no good.

If the place the serum is injected at is not cleaned and washed with a disinfectant, 5 per cent carbolic acid, *abscess may occur*. Make the injections under the skin, and not into the meat as advised by most manufacturers of serum. In the case of pregnant sows or large and unruly animals, make the injections behind the ear, snubbing the animal against a post, by means of a rope looped around the chest. The syringe should be loosened up in its parts after a day's work, thoroughly washed out, and boiled; otherwise abscesses will occur in the next hogs treated.

Serum does not hurt the meat. The stain left on the meat will pass away in time. Unlike in other diseases, it is not necessary to separate the sick from the well, but it is highly advisable to bury or burn all the animals that die, thus preventing, in a measure, the disease being carried to your neighbors by carrion-eating birds. When properly used, the serum protects the hog for about a year, the life of the pork hog. Breeders must be treated every year. The serum does not cause sick hogs to die earlier. Handling is the cause. It is a waste of serum, the owner's time and the State's money to treat sick hogs. Serum should not be applied for until you have arranged with your local agent who has a syringe to do the work for you. These syringes are sold by the Bettes' Pharmacy, Jacksonville, for \$4.50, ounce size. The owner pays the agent for his work. Owners who are familiar with the work and who have their own syringe, may obtain serum. *The serum can only be obtained by applying for same on the application blank*, and agents should keep a supply of these on hand. It does not hurry matters to telegraph for serum. Serum ordered and not used should be returned immediately, if the bottle has remained unopened, at the sender's expense. When possible the serum should be kept on ice. In other cases it may be kept in a hole in the ground, in a shady place. Make your report of the use of the serum a month after you have used it, on the blank which you will find in the package of serum sent you. Please be careful to

fill out the blanks and answer all the questions as far as you can, on the application blank, being sure to give postoffice and express office addresses, and the name of your local agent. *Application blank is also an agreement that you report on use of all serum sent you.*

The Hog Cholera Agents of the State Board of Health are as follows. Consult your County Agent when you wish to have your hogs treated:

ALACHUA COUNTY.	Hampton—	DeSOTO COUNTY.
Alachua—	L. J. Wynn.	Bowling Green—
C. S. Douglass.	Lawley—	L. R. Sealey.
J. A. Frederick.	Dr. G. W. Brown.	Bridges—
M. F. Studstill.	Starke—	M. H. Harrison.
Archer—	D. W. Alvarez.	Fort Green—
W. J. Jones.	Theo. Tison.	Dr. C. A. Gavin.
Campville—	_____	Limestone—
Dr. G. W. Sherhouse.	CALHOUN COUNTY.	A. Albritton.
Gainesville—	Altha—	Nocatee—
G. W. Harrison.	C. A. Langford.	Dr. R. F. Carlton.
Hawthorn—	Blountstown—	Punta Gorda—
J. F. Carlton.	J. L. Griffin.	Jas. S. Goff.
G. D. Moore.	Henderson—	_____
R. Price.	T. Fields.	DUVAL COUNTY.
Micanopy—	_____	Baldwin—
R. E. Arnow.	CITRUS COUNTY.	J. M. Saucer.
Earl D. Matthews.	Chronelle—	Lee Thomas.
D. R. Zetrouer.	W. F. Sutton.	Bayard—
Newberry—	Crystal River—	H. L. Manners.
J. B. Smith.	J. T. Rawls.	Broward—
Trenton—	Hernando—	J. S. Higginbotham.
Geo. Asbell.	Dr. A. D. Puterbaugh.	Mandarin—
S. K. DuPuis.	_____	Dr. Geo. D. Kennedy.
Windsor—	CLAY COUNTY.	_____
G. A. Byles.	Belmore—	ESCAMBIA COUNTY.
_____	E. E. Geiger.	Atmore, Ala.—
BAKER COUNTY.	Green Cove Springs—	J. L. Godwin.
Macclenny—	J. L. Batten.	Pensacola—
R. C. Clews.	G. R. Hall.	W. M. Malone.
W. E. Schoch.	Middleburg—	R. 1, Box 66.
Taylor—	W. W. Hamilton.	J. C. OuBre,
R. R. Rhoden.	M. M. West.	214 S Palafox.
W. B. Taylor.	Waller—	Pine Barren—
_____	McL. Conoly.	W. H. Johnston.
BAY COUNTY.	_____	_____
Panama City—	COLUMBIA COUNTY.	GADSDEN COUNTY.
W. R. McDaniels.	J. L. Lichenstine.	Chattahoochee—
_____	Lake City—	J. L. Lindsay, Jr
BRADFORD COUNTY.	P. G. Brown.	Greensboro—
Dukes—	B. D. Jordan.	J. L. Shepard.
S. M. Dukes.	S. W. Lamb.	_____
_____	C. C. Parker.	_____

Gretna—	Cottondale—	Chaires—
D. D. Edwards.	W. H. Harrison.	W. T. Graham.
Havana—	Grand Ridge—	Tallahassee—
M. E. McCorquadale.	W. J. Bradley.	T. M. Atkinson.
Juniper—	Inwood—	_____
W. D. Richards.	W. W. Wester.	LEVY COUNTY.
Quincy—	Jacob—	Bronson—
J. G. Ball.	Dr. M. W. Eldridge.	G. A. Boyd.
_____	Sneads—	S. W. Faircloth.
HAMILTON COUNTY.	A. J. Brunson.	Echo—
Jasper—	Alfred Griffin.	T. C. Hogan.
Dr. J. H. Corbett.	L. L. Spooner.	Montbrook—
Lake Park, Ga.—	G. R. Spooner.	J. B. George.
John Colson.	Drs. Wilson &	Morrison—
White Springs—	Hudgens.	Lawton Priest.
W. M. Bennett.	_____	Newton—
_____	JEFFERSON COUNTY.	Geo. Asbell, Trenton.
HERNANDO COUNTY.	Aucille—	New Town—
Brooksville—	Dr. W. N. McLeod.	S. S. Smith.
Croom—	Lamont—	Rosewood—
J. T. Downing, Trilby.	Dr. W. H. Walker.	Mr. Coarsey, Postmas-
Istachatta—	Lloyd—	ter.
Dr. McKnight.	S. B. Coxetter.	Williston—
_____	Lovett—	W. E. Brown.
HILLSBOROUGH COUNTY.	John E. Morris.	_____
Knights—	Monticello—	LIBERTY COUNTY.
A. E. Carlton.	G. C. McCall.	Bristol—
Plant City—	_____	W. S. Summers.
D. J. Allen.	LA FAYETTE COUNTY.	Dr. E. K. Thagard.
E. G. Bugg.	Day—	Sumatra—
W. L. Holloway.	A. J. Fowler.	R. D. Fryer.
Tampa—	Mallory—	_____
Dr. F. W. Porter.	T. A. Fletcher.	MADISON COUNTY.
Thonotosassa—	Steinhatchee—	Ebb—
R. W. Weatherington.	J. D. Johnson.	A. B. Sever.
_____	_____	_____
HOLMES COUNTY.	LAKE COUNTY.	MARION COUNTY.
Bonifay—	Lady Lake—	Bay Lake—
H. D. Brock.	J. M. Walton.	E. F. Wilson.
Noma—	Tavares—	Burbank—
Dr. R. B. Warren.	W. J. Rogers.	J. B. Haney.
Westville—	_____	Conners—
Dr. D. G. Milton.	LEE COUNTY.	R. F. Rogers.
_____	Fort Myers—	LeRoy—
JACKSON COUNTY.	W. H. Towles.	J. D. Williams.
Campbellton—	_____	McIntosh—
J. C. Clark.	LEON COUNTY.	S. H. Gaitskill.
Dr. W. A. Parrish.	Bloxham—	Morrison—
_____	L. W. Stoutamire.	J. B. George.

<i>Ocala</i> — Dr. J. H. Dunn.	ST. JOHNS COUNTY. <i>Baker</i> — J. R. Miller.	<i>O'Brien</i> — Dr. J. H. Reynolds.
<i>Romeo</i> — J. E. Walker.	<i>Dewey</i> — H. L. Manners, Bayard.	<i>Wellborn</i> — A. S. Hogans. Dr. McClellan.
<i>Sparr</i> — W. Luffman.	<i>Dupont</i> — Dr. D. B. Brown.	<i>Wilmarth</i> — C. W. Cheshire.
ORANGE COUNTY. <i>Orlando</i> — Dr. B. D. Wienenga.	<i>Durbin</i> — H. L. Manners, Bayard.	TAYLOR COUNTY. <i>Perry</i> — Barney O'Quinn.
OSCEOLA COUNTY. <i>Kissimmee</i> — J. E. Lupper. J. M. Lee. E. L. D. Overstreet.	<i>Elkton</i> — Dr. F. S. Whitney.	VOLUSIA COUNTY. <i>Bunnell</i> — <i>Favorita</i> — <i>Harwood</i> — <i>Hammond</i> — <i>Ormond</i> — <i>Seville</i> — <i>Volusia</i> — Dr. D. B. Brown, Dupont.
POLK COUNTY. <i>Bartow</i> — A. O. Graddy. Dr. H. P. Newman.	<i>Hastings</i> — Dr. A. Dolan.	<i>Glenwood</i> — W. A. Bredow.
<i>Bradley Junction</i> — J. C. English. W. H. Surrency.	<i>Orangedale</i> — W. McL. Jenkins.	WAKULLA COUNTY. <i>Sopchoppy</i> — Chas. K. Allen.
<i>Fort Meade</i> — A. H. DeVane.	<i>St. Augustine</i> — Dr. B. A. Leak.	<i>Wakulla</i> — G. S. Neesmith.
<i>Lakeland</i> — Dr. D. P. Carter. James H. Jones.	<i>Switzerland</i> — H. L. Manners, Bayard.	WALTON COUNTY. <i>DeFuniak Springs</i> — Prof. H. J. Rogers.
PUTNAM COUNTY. <i>Keuka</i> — C. H. Price.	ST. LUCIE COUNTY. <i>Sebastian</i> — W. F. Baughman.	<i>Floral, Ala.</i> — P. S. McClung. Alex. McRae.
<i>Palatka</i> — J. P. Neubeck.	SUMTER COUNTY. <i>Coleman</i> — B. C. Bridges.	<i>Laurel Hill</i> — J. B. Steel.
<i>Sisco</i> — J. E. Wells.	<i>Oxford</i> — T. E. O'Del.	WASHINGTON COUNTY. <i>Chipley</i> — G. A. Danley. Dr. J. G. Phillips.
SANTA ROSA COUNTY. <i>Jay</i> — C. V. Mixon.	<i>Webster</i> — Dr. S. C. Wood.	<i>Duncan</i> — R. E. Golden.
<i>Milton</i> — D. W. T. Edger. Dr. H. Mason Smith. J. M. Nobles. H. J. Stoners. J. W. Urquhart.	SUWANEE COUNTY. <i>Branford</i> — M. A. Best. C. P. Odom. <i>Dowling Park</i> — Jno. P. Howland, Jr. <i>Live Oak</i> — Grover C. Hodge. Horace Hurst. A. C. Johnson. Dr. W. C. White. <i>Newburn</i> — Jno. P. Howland, Jr.	

COUNTY FARM DEMONSTRATION AGENTS.

The following county farm demonstration agents have been appointed agents for the administration of anti-hog-cholera serum, and are also interested in tick-eradication.

Baker County—E. W. Turner, Agent, Macclenny.
Bradford County—O. L. Mizell, Agent, Dukes.
Columbia County—J. D. Brown, Agent, Lake City.
Escambia County—S. W. Hiatt, Agent, Pensacola.
Gadsden County—M. C. Gardner, Agent, Greensboro.
Hillsboro County—R. T. Kelley, Agent, Plant City.
Holmes County—C. A. Fulford, Agent, Bonifay.
Jackson County—G. W. Belser, Agent, Cottondale.
LaFayette County—D. C. Geiger, Agent, Mayo.
Levy County—W. E. Brown, Agent, Williston.
Leon County—Frank Robinson, (col.), Agent, Tallahassee.
Liberty County—A. W. Turner, Agent, Bristol.
Madison County—D. R. McQuarrie, Agent, Madison.
Marion County—S. J. McCully, Agent, Berlin.
Orange County—C. H. Baker, Agent, Zellwood.
Pasco County—I. E. Soar, Agent, Dade City.
Polk County—A. A. Lewis, Agent, Kathleen.
Santa Rosa County—C. C. Simmons, Agent, Botts.
Suwannee County—T. Z. Atkeson, Agent, Live Oak.
Walton County—J. C. Smith, Agent, DeFuniak Springs.
Washington County—D. G. McQuaggie, Agent, Chipley.
DeSoto County—Joseph Crews, Agent, Wauchula.

The following statistical table will indicate the activities of the Board in the distribution of hog cholera serum in 1913:

DISTRIBUTION OF HOG CHOLERA SERUM IN FLORIDA IN 1913

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
ALACHUA													
Serum Distributed (cc)	7000	9500			6250	4000		9000	7500	20250	2250	2000	67750
Serum Administered (cc)	3250	2835	*4470	1245	400	1500	1080	480	4270	3875		1000	24405
Hogs Reported Treated	113	94	181	50	18	75	39	20	227	140		40	997
Estimated Weight Hogs	8325	6400	10900	3750	1550	4000	2350	1600	11200	5250		2650	57975
Serum Not Reported													43345
Cost of Serum Supplied													\$1084 00
BAKER													
Serum Distributed (cc)						500							500
Serum Administered (cc)							190						190
Hogs Reported Treated							13						13
Estimated Weight Hogs							450						450
Serum Not Reported													310
Cost of Serum Supplied													\$8 00
BAY (No Serum Supplied)													
BRADFORD													
Serum Distributed (cc)				1000	750			6500			500		\$750
Serum Administered (cc)					500								850
Hogs Reported Treated	350				16								31
Estimated Weight Hogs	15				1000								2050
Serum Not Reported	1050												7900
Cost of Serum Supplied													\$140 00
BREWARD (No Serum Supplied)													
CALHOUN (No Serum Supplied)													

CITRUS													
Serum Distributed (cc)	2000	1000	2750						2500	1500	11250	1500	22500
Serum Administered (cc)	105	290							1350	1000	1815		5150
Hogs Reported Treated	6	17							49	52	82		232
Estimated Weight Hogs	1250												17350
Serum Not Reported	400		850						5950	2800	6300		17550
Cost of Serum Supplied													\$360 00
CLAY													
Serum Distributed (cc)								2500		8500	3750	500	15250
Serum Administered (cc)								1000		3000	2345		6495
Hogs Reported Treated	150	6						61		97	96		260
Estimated Weight Hogs	450							2950		8010	5925		17335
Serum Not Reported													8755
Cost of Serum Supplied													\$244 00
COLUMBIA													
Serum Distributed (cc)			500	250					3050	2000		1250	7050
Serum Administered (cc)	1625							*2000					4520
Hogs Reported Treated	41	102						97					240
Estimated Weight Hogs	2140							3950					10240
Serum Not Reported													2530
Cost of Serum Supplied													\$112 80
DADE													
Serum Distributed (cc)												1750	1750
Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													1750
Cost of Serum Supplied													\$28 00
DE SOTO													
Serum Distributed (cc)	2000					2000			3000	1750	3000	1250	13750
Serum Administered (cc)	1465								785	500	1525	835	5110

DISTRIBUTION OF HOG CHOLERA SERUM IN FLORIDA IN 1913. - (Continued).

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
Hogs Reported Treated		75						57	40		61	38	271
Estimated Weight Hogs		4060						2600	800		11650	2475	21585
Serum Not Reported													8640
Cost of Serum Supplied													\$220 00
DUVAL													
Serum Distributed (cc)				2000			1000			500	1250	500	5250
Serum Administered (cc)							1200						1200
Hogs Reported Treated							53						53
Estimated Weight Hogs							4050						4050
Serum Not Reported													4050
Cost of Serum Supplied													\$84 00
ESCAMBIA													
Serum Distributed (cc)	3000	4000		5000	4250	750				750	500		18250
Serum Administered (cc)	1035	1875	690	2090	3485	2670						435	12280
Hogs Reported Treated	56	82	13	113	196	129						20	609
Estimated Weight Hogs	4175	5860	500	6900	10000	9100						1460	37995
Serum Not Reported													5970
Cost of Serum Supplied													\$284 00
FRANKLIN													
(No Serum Supplied)													
GADSDEN													
Serum Distributed (cc)			1000		750					500			2250
Serum Administered (cc)					745								745
Hogs Reported Treated					38								38
Estimated Weight Hogs					2550								2550
Serum Not Reported													\$36 00
Cost of Serum Supplied													1505

208

HAMILTON													
Serum Distributed (cc)	2000			1000									5250
Serum Administered (cc)	1900												2030
Hogs Reported Treated	92												98
Estimated Weight Hogs	7130												7480
Serum Not Reported													3220
Cost of Serum Supplied													\$84 00
HERNANDO													
Serum Distributed (cc)											2500		2500
Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													2500
Cost of Serum Supplied													\$40 00
HILLSBOROUGH													
Serum Distributed (cc)	3000			7750	750	2500		750		2000	1250	4250	22250
Serum Administered (cc)	75			5000	1080	540				1500	450		8645
Hogs Reported Treated	2			242	58	23				80	15		420
Estimated Weight Hogs	400			19650	3100	1900				7800	1660		34510
Serum Not Reported													13605
Cost of Serum Supplied													\$356 00
HOLMES													
Serum Distributed (cc)			2000				2000						4000
Serum Administered (cc)							2000						2000
Hogs Reported Treated							130						130
Estimated Weight Hogs							8950						8950
Serum Not Reported													2000
Cost of Serum Supplied													\$64 00
JACKSON													
Serum Distributed (cc)	1000			3500	2500	11000	3000		2500	3750		3750	32000
Serum Administered (cc)				1525		3570	2550		2205	4315	1715	2750	19355
Hogs Reported Treated	725			80		166	86		168	129	117	178	951

209

DISTRIBUTION OF HOG CHOLERA SERUM IN FLORIDA IN 1913--(Continued).

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
Estimated Weight Hogs													120395
Serum Not Reported		3250		4800		9800	11500		41100	21950	3015	24080	12645
Cost of Serum Supplied													\$512 00
JEFFERSON													
Serum Distributed (cc)	2000			1500			2250						5750
Serum Administered (cc)				*810									810
Hogs Reported Treated				38									38
Estimated Weight Hogs				2600									2600
Serum Not Reported													4940
Cost of Serum Supplied													\$92 00
LAFAYETTE													
Serum Distributed (cc)			14000							8750	750	3750	27250
Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													27250
Cost of Serum Supplied													\$436 00
LAKE													
Serum Distributed (cc)				500	500								1000
Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													1000
Cost of Serum Supplied													\$16 00
LEE													
(No Serum Supplied)													

210

LEON				1000	750	1250	1750						4750
Serum Distributed (cc)					1040	510	2505	1000					**7255
Serum Administered (cc)					51	23	104	37					301
Hogs Reported Treated					3150	1400	8300	3050					22480
Estimated Weight Hogs													
Serum Not Reported													
Cost of Serum Supplied													\$76 00
LEVY													
Serum Distributed (cc)				500	500	750	4250	8750	11250	12750	4250	2500	45500
Serum Administered (cc)					650		1450	5680	5990	12870	2480	1180	31650
Hogs Reported Treated					39		57	260	279	559	100	64	1419
Estimated Weight Hogs					2100		5350	11300	14750	38820	7950	4800	89520
Serum Not Reported													13850
Cost of Serum Supplied													\$728 00
LIBERTY													
Serum Distributed (cc)													
Serum Administered (cc)													
Hogs Reported Treated													850
Estimated Weight Hogs													36
Serum Not Reported													2500
Cost of Serum Supplied													
MADISON													
Serum Distributed (cc)					500								500
Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													500
Cost of Serum Supplied													\$8 00
MANATEE													
(No Serum Supplied)													

211

DISTRIBUTION OF HOG CHOLERA SERUM IN FLORIDA IN 1913. (Continued).

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
MARION													
Serum Distributed (cc)	5000		3000	1250	4000	2000		1500	2000	2000	6750	1250	28750
Serum Administered (cc)	2340		3800	1865	930	800	2915	*505	200	2555	420		16330
Hogs Reported Treated	175		176	106	29	69	133	21	10	119	28		866
Estimated Weight Hogs	9690		14200	4900	900	3450	7600	1000	850	6520	560		49670
Serum Not Reported													12420
Cost of Serum Supplied													\$460 00
MONROE													
Serum Distributed (cc)			1250										1250
Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													1250
Cost of Serum Supplied													\$20 00
NASSAU													
(No Serum Supplied)													
ORANGE													
Serum Distributed (cc)												750	750
Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													750
Cost of Serum Supplied													\$12 00
OSCEOLA													
Serum Distributed (cc)						250							250
Serum Administered (cc)				*250									250
Hogs Reported Treated				5									5
Estimated Weight Hogs				1600									1600
PALM BEACH													
(No Serum Supplied)													\$4 00
PASCO													
(No Serum Supplied)													
PINELLAS													
Serum Distributed (cc)										2000			2000
Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													2000
Cost of Serum Supplied													\$32 00
POLK													
Serum Distributed (cc)			*2040			500				4500			5000
Serum Administered (cc)			87			200							2240
Hogs Reported Treated			5800			15							102
Estimated Weight Hogs						450							6250
Serum Not Reported													2760
Cost of Serum Supplied													\$80 00
PUTNAM													
Serum Distributed (cc)	1000												1500
Serum Administered (cc)	1170												2020
Hogs Reported Treated	54							*350					94
Estimated Weight Hogs	4250							15					6500
Serum Not Reported								1200	1050				
Cost of Serum Supplied													\$24 00
SANTA ROSA													
(No Serum Supplied)													

DISTRIBUTION OF HOG CHOLERA SERUM IN FLORIDA IN 1913.—(Continued).

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
SEMINOLE (No Serum Supplied)													
SAINT JOHN													
Serum Distributed (cc)				4000	2250	750			1750	750	1000		10500
Serum Administered (cc)					100	4120		*110					4330
Hogs Reported Treated					4	163		5					172
Estimated Weight Hogs					250	10050		300					10600
Serum Not Reported													6170
Cost of Serum Supplied													\$168 00
ST. LUCIE (No Serum Supplied)													
SUMTER													
Serum Distributed (cc)							3500	4000	4750	1750	6250	8250	28500
Serum Administered (cc)									700			7950	8650
Hogs Reported Treated									25			329	354
Estimated Weight Hogs									1950			23050	25000
Serum Not Reported													19850
Cost of Serum Supplied													\$456 00
SUWANEE													
Serum Distributed (cc)	4000	3000		2250	5500	21750	15500	4000	4200	7500		750	68450
Serum Administered (cc)	2200	1820	900		800	1170	17100	8380	2195	1650		470	36685
Hogs Reported Treated	82	75	40		17	47	809	279	65	48		11	1473
Estimated Weight Hogs	8200	5520	2100		1100	2850	44700	30650	6200	5500		850	107670
Serum Not Reported													31765
Cost of Serum Supplied													\$1095 20
TAYLOR													
Serum Distributed (cc)										5500			5500

Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													5500
Cost of Serum Supplied													\$88 00
VOLUSIA													
Serum Distributed (cc)										2250			2250
Serum Administered (cc)													
Hogs Reported Treated													
Estimated Weight Hogs													
Serum Not Reported													2250
Cost of Serum Supplied													\$36 00
WAKULLA													
Serum Distributed (cc)				1000				750					1750
Serum Administered (cc)													840
Hogs Reported Treated													41
Estimated Weight Hogs													2060
Serum Not Reported													910
Cost of Serum Supplied													\$28 00
WALTON													
Serum Distributed (cc)				750	250	1250	1250	1000	2000	3250			10750
Serum Administered (cc)						300	375	555	1360		1395		5055
Hogs Reported Treated						14	17	25	70		53		214
Estimated Weight Hogs						700	900	1450	3700		4325		14775
Serum Not Reported													5695
Cost of Serum Supplied													\$172 00
WASHINGTON													
Serum Distributed (cc)													
Serum Administered (cc)													
Hogs Reported Treated													2045
Estimated Weight Hogs													80
Serum Not Reported													5900

DISTRIBUTION OF HOG CHOLERA SERUM IN FLORIDA IN 1913.—(Continued).

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
Cost of Serum Supplied													
Serum Supplied State Board of Health Veterinarians		6000	4000	1000	4000	1500	3000	5000			2500		27000
TOTALS (For 1913)													
Serum Distributed (cc)	18000	26000	47000	27500	39500	49500	37250	47750	41750	93750	44750	35250	508000
Serum Administered (cc)	13935	13475	22380	8865	9780	14715	31745	21650	17910	30765	12145	14620	211985
Hogs Reported Treated	659	535	1007	456	462	689	1464	922	888	1224	552	680	9538
Estimated Weight Hogs (pounds)	47935	38760	68675	27650	26050	41550	95150	62300	83850	96650	42285	59365	690240
Serum Not Reported													296015
Cost of Serum Supplied													\$8120 00

*Serum administered by veterinarians of the State Board of Health.

**Portion of this amount administered by agents from Gadsden County.

GLANDERS.

Glanders, the most important horse and mule disease, from the standpoint of the sanitarian, has been unusually plentiful the past year, more particularly, in and near Jacksonville.

There have been 63 cases in the State; 52 of these were found in Jacksonville and its suburbs.

While most of the cases could be diagnosed on inspection, it was necessary to apply the mallein test in many outbreaks that the disease might be effectually eradicated. The horses and mules tested with mallein numbered 227.

With the figures and information at hand, at the end of a somewhat strenuous year's work in glanders in Jacksonville, one can not but believe that two, possibly three, dealers doing horse-trading business in Jacksonville and its suburban district have knowingly, or unknowingly—let us hope the latter—imported glandered stock from the large horse markets, where it is always plentiful. There is no other way of accounting for the facts that numerous cases give the history of having been sold by Mr. so and so about a year ago, and that the dealer is known to have shipped a carload from Chicago, or other large market about that time. Of course, no buyer could find a nest of visibly-glandered horses on the open market being offered for sale; but he might, if he looked far enough, find a lot that had been bunched as "reactors to mallein." These, having the disease in a latent form, could easily make the trip to Florida and not show the disease for a year, by which time they would have changed owners many times, possibly; so that it would be next to impossible to fix the responsibility. Such horses would be sold cheap, with or without knowledge on the part of the buyer of what he was getting. Such business is disreputable in the extreme, as it causes no end of trouble and loss to innocent people. If the losses could be confined to those engaged in the deals, we should probably have little to say, as horse dealers usually know how to look after their own interests.

With the adoption of the regulations proposed in another article of this report, requiring the mallein test chart to accompany all shipments of horses, mules and asses, and signed by the veterinary authorities of the State in which the shipments originate, and the strict application of the mallein test in every outbreak that occurs

in the State, there is no reason why the number of cases will not be reduced to a very small number in future years.

The disease has cost the State nearly \$5,000.00 in condemnations this year. This amount is less than the disease has cost the people who owned the animals when they were condemned, because every animal has cost the owner more than \$75.00, the maximum amount allowed by law for an animal condemned for glanders.

THE NEW TEST FOR GLANDERS.

A new test that is practical and reliable has lately been advocated and put into practice. The writer has had opportunities of testing the method on horses that were evidently glandered and hereby recommends it. It is known as the *Ophthalmic* or *Conjunctival* test, and has the great advantage that it is simple, easy to apply, and no temperatures need be taken. These are great advantages in working amongst troublesome and unruly animals.

The following is the report of the Special Committee for the Detection of Glanders, made to the American Veterinary Medical Association at New York, September, 1913:

In applying test, first examine the eye to be used to see that it is sound and has a perfectly normal conjunctiva.

A temperature may be taken, although the presence of fever does not interfere.

Place 4 or 5 drops, or 0.1 to 0.2 cc. of undiluted mallein, or of 5 per cent. solution of precipitated mallein within the lower eyelid with a dropper, glass rod, or camel's hair brush. The other eye is left untouched to serve as a control.

As soon as the mallein is applied, a flow of tears nearly always appears, with reddening of the conjunctiva and photophobia. These phenomena have no significance and disappear in several hours. The characteristic manifestations of a positive reaction begin in 5 to 6 hours and last 36 to 48 hours, sometimes longer. *A purulent secretion or discharge with reddening of the conjunctiva alone is significant of a positive reaction.* Swelling and gluing of eyelids may be seen in severe reactions.

The eyelid should be examined and compared in good light 16 to 18 hours after test is applied. The conjunctiva and the eyeball should also be included in the examination after noting the discharge. Generally the positive reaction is not accompanied by temperature rise or general reaction. The temperature variation does not occur in negative tests or normal animals. In positive reactions the rise may be observed in taking the temperature twice, the first time when the test is applied, and the second when the readings are made 16 to 18 hours later.

The results of the test are to be interpreted and recorded as follows:

1. Negative, N, eye unchanged.
2. Suspicious, S, sero-mucous discharge.
3. Positive, P-|-, sero-mucous discharge with purulent flakes.
4. Positive, P-|-|-|-, Distinct purulent discharge.
5. Positive, P-|-|-|-|-, A purulent discharge with swelling of the lower eyelid.
6. Positive, P-|-|-|-|-|-, Strong purulent discharge with gluing together of both lids.

If the result of the test is negative or questionable 24 hours after the first application, the test may be repeated at once on same eye or the control eye. If repetition is also negative or questionable, the test may be repeated in three weeks.

The intensity of this reaction bears no relation to the stage or development of the infection.

I recommend the adoption of this method by the Board, and hope and believe it will soon be adopted by all other States, as its advantages over the old, cumbersome method heretofore employed, are many and obvious.

CASES OF GLANDERS DURING THE YEAR 1913.

COUNTY	TOWN	MONTH	OWNER	No. ANIMALS KILLED	REIMBURSEMENT
Hillsboro	Tampa	January	A. B. Giles	1 mule	\$ 75.00
Duval	Jacksonville	February	T. M. Wanesby	1 horse	75.00
Pasco	San Antonio	February	V. de Equivelley	1 mare	75.00
St. John	Hastings	February	J. Levine	1 mare	75.00
Bradford	Raiford	March	Renfro & Williams	1 mule	75.00
Bradford	Lake Butler	March	Tom Haney	1 mule	0
Duval	Jacksonville	March	Chas. Haney	1 horse	0
Duval	Jacksonville	March	C. L. Mears	1 horse	0
Duval	Jacksonville	April	A. & P. Tea Co.	1 horse	75.00
Duval	Jacksonville	April	Sam Wallace	1 mule	75.00
Duval	Jacksonville	May	H. McDonald	1 horse	75.00
Duval	Jacksonville	May	J. E. Chestnut	1 mare	75.00
Duval	Jacksonville	May	Louis Baker	1 mule	75.00
Duval	Jacksonville	May	Sam Wallace	1 mule	75.00
Duval	Jacksonville	May	Jas. Jenkins	1 mule, 1 horse	150.00
Duval	Jacksonville	May	Jno. A. Cunningham	1 mare	75.00
Duval	Jacksonville	June	City of Jacksonville	1 mule	75.00
Dade	West P. Beach	June	E. L. Wade	1 horse	75.00
Duval	Jacksonville	June	Jas. Topham	1 horse	75.00
Duval	Jacksonville	June	Ice Delivery Co.	1 mule	75.00
Duval	Marietta	June	Wm. Laurimore	1 mare	75.00
Duval	Jacksonville	June	Cons. Grocery Co.	2 mules	150.00
Duval	Jacksonville	June	Unknown	1 mule	0
Duval	Jacksonville	July	T. Nooney & Sons	1 horse	75.00
Duval	Jacksonville	July	T. Nooney & Sons	4 horses	300.00
Duval	Jacksonville	July	R. B. Trantham	1 horse, 1 mule	150.00
Duval	Jacksonville	July	C. C. Jones	1 mule	75.00
Duval	Jacksonville	July	J. A. Oglesby	1 horse	75.00
Duval	Jacksonville	July	Mary Lanier	1 horse	75.00
Orange	Forest City	July	G. Bionkander	1 horse	75.00
Duval	Jacksonville	August	C. R. Coonan	1 horse	75.00
Duval	Jacksonville	August	H. M. Philpot	1 horse	75.00
Duval	Jacksonville	August	H. M. Philpot	2 mules	150.00
Duval	Jacksonville	August	H. M. Philpot	1 horse	75.00
Duval	Jacksonville	August	H. S. Lockwood	1 mule, 1 horse	75.00
Duval	Jacksonville	September	H. S. Lockwood	1 mare	150.00
Duval	Jacksonville	September	W. E. Grace	1 horse	75.00
Duval	Jacksonville	September	Dr. Stout	1 mare	75.00
Duval	Jacksonville	September	H. S. Lockwood	1 horse, 1 mare	150.00
Duval	Jacksonville	September	H. M. Philpot	1 mule	75.00
Duval	Jacksonville	September	S. Permenter	1 mare	75.00
Duval	Jacksonville	September	Gordon Permenter	1 horse	75.00
Duval	Jacksonville	October	J. R. Bozley	1 mule	75.00
Duval	Jacksonville	October	M. Corse	1 mule	75.00

Duval	Jacksonville	October	Geo. Sprague	1 horse	75.00
Duval	Jacksonville	October	City of Jacksonville	1 mule	75.00
Duval	Jacksonville	October	H. H. Spencer	1 horse	75.00
Duval	Jacksonville	October	W. E. Grace	1 horse	75.00
Osceola	Kissimmee	October	F. Franklin	1 horse	75.00
Duval	Jacksonville	October	S. Permenter	1 horse	75.00
Duval	Jacksonville	November	J. Safer	1 horse	75.00
Duval	Jacksonville	November	C. H. Coonan	1 horse	75.00
Duval	Jacksonville	November	S. Permenter	1 horse	75.00
Duval	Jacksonville	December	S. Permenter	1 horse	75.00
Total				63	\$4,425.00

A YEAR'S PROGRESS IN TICK ERADICATION EDUCATION.

On the 10th of June, 1912, I addressed a letter to the Chief of the Bureau of Animal Industry, stating I proposed to start a campaign of education upon the subject of tick eradication, in Florida. Two months later, the following reply was received:

BUREAU OF ANIMAL INDUSTRY.

Washington, D. C., August 16, 1912.

Dr. Charles F. Dawson, Veterinarian, State Board of Health,
Jacksonville, Fla.

Sir—Reference is made to your letter of June 10, 1912, in which you state it is your intention to start an educational campaign on tick eradication through your monthly publication, "Health Notes."

It appears that the State of Florida has not provided the necessary laws and regulations under which the Bureau can co-operate with you in conducting systematic tick eradication work. However, Dr. E. M. Nighbert, inspector-in-charge, Federal Building, Atlanta, Ga., who has immediate supervision for the Bureau over the work of tick eradication in the States of Georgia and South Carolina, will be instructed to arrange with you for a conference, and co-operate with you in your educational campaign in so far as he can with the means at hand.

Very respectfully,
A. M. FARRINGTON,
Acting Chief of Bureau

Dr. Nighbert, in later correspondence, suggested a meeting of stockmen for the purpose of initiating a movement having for its object the organization of the live-stock men. About this time the Agricultural College of the University of Florida was arranging for a meeting of agriculturalists, in December, 1912. The matter of having tick eradication on the program as a subject for discussion was suggested and met with the approval of the College authorities in charge of the program. The meetings were held on December 16th, 17th and 18th, 1912. There was a large number of persons present, and Drs. E. M. Nighbert, of the Bureau of Animal Industry, and Peter H. Bahnsen, State Veterinarian of Georgia, made effective addresses on the subject.

One of the results of the meeting was the formation of the Florida Live Stock Association, with Ex-Senator C. F. Barber, as President; Z. C. Chambliss, as Vice President, and Professor C. L. Willoughby, as Secretary. A constitution and by-laws were

adopted, and the Association was launched upon its career, having the active aid of the State Board of Health, the Federal Bureau of Animal Industry, and the Agricultural College of the State University.

As practical men, the Association realized that the best and most effective method of work was to favor the immediate building of dipping vats, that the people might see for themselves the vast benefits of ridding cattle of ticks by dipping. Mr. Barber was the first to build a dipping vat, and it was opened with imposing ceremonies at his plantation, near Macclenny, on February 22, 1913. Others followed in rapid succession, in all parts of the State, so that by the end of 1913, there were completed thirty-two vats, as follows:

CATTLE DIPPING VATS BUILT IN FLORIDA IN 1913.

ALACHUA COUNTY.	HOLMES COUNTY.
Bock & McDonald, Daysville, February.	W. A. Sessoms, Bonifay, November.
A. L. Jackson, Gainesville, March.	LEON COUNTY.
P. G. Ramsey, Wacahoota, April.	Leon County Live Stock Club, A.
John R. Zetrouer, Rochelle, May.	P. McCaskill, Tallahassee, April.
A. B. Zetrouer, Rochelle, May.	MARION COUNTY.
W. B. Phifer, Rochelle, June.	S. H. Gaitskill, McIntosh, April.
C. F. Harrison, Clyatts Station, July.	J. R. Williams, Citra, May.
College of Agriculture, Gainesville, December.	Jack Camp, Ocala, July.
BAKER COUNTY.	ORANGE COUNTY.
C. F. Barber, Macclenny, February.	William Edwards, Zellwood, November.
R. Rooney, Baxter, October.	OSCEOLA COUNTY.
DUVAL COUNTY.	E. L. Lesley, Kissimmee, May.
Riverside Dairy Co. (J. C. B. DeBevoise), March.	H. T. Bass, Southport, October.
ESCAMBIA COUNTY.	PUTNAM COUNTY.
Southern States Lumber Co. (P. K. Yonge, manager, Muscogee), November.	C. L. Whitehead, Hollister, September.
GADSDEN COUNTY.	PASCO COUNTY.
State Insane Asylum (W. W. Trammell, superintendent), Chattahoochee, November.	Kirby Williams, Dade City, November.
	C. A. Croft, Trilby, July.

SEMINOLE COUNTY.

J. C. Cameron, Geneva, November.

HILLSBOROUGH COUNTY.

Aug. Van Epoel, Tampa, August.

HAMILTON COUNTY.

H. S. McCallum, Winn, October.

JACKSON COUNTY.

J. W. Hinson, Cottondale, June.

LAKE COUNTY.

W R. Matthews, Leesburg, October.

SUWANEE COUNTY.

Frank Drew, Wilmarth, June.

ST. JOHN COUNTY.

F. E. Bugbee, Hastings, August.

Total—32.

In June, 1913, the Florida Legislature, in its wisdom, passed the following bill, and the same became a law on June 7, 1913:

(From Laws of Florida, 1913.)

CATTLE TICK ERADICATION.

Chapter 6434—(No. 14.)

An Act to Provide the State Board of Health with Funds for the Eradication of the Southern Cattle Tick; to Authorize the County Commissioners of the Various Counties to Appropriate Funds to be Used in Such Work; and to Permit the Appointment of Federal Officials as Agents Without Pay.

Be it Enacted by the Legislature of the State of Florida:

SECTION 1. The State Board of Health is hereby authorized, empowered and directed to expend, under the regulations provided by existing law, such amounts as the Board may deem necessary and expedient, out of the funds derived from the operation of Chapter 4693, Acts of 1899, in the control and eradication of the Southern Cattle Tick, through the employment of State and County Agents, payment for labor and materials, and for any other expenditures that may be found useful and necessary in the prosecution of such work; and the Board of Health is hereby authorized and empowered, after investigation of suitable locations, and upon recommendation of the Executive Committee of the Florida State Live Stock Association, to construct cattle dipping vats in communities where such aid is deemed useful for demonstration and proper conduct of tick eradication work.

SECTION 2. The County Commissioners of any county of the State of Florida are hereby authorized and empowered to appropriate such amounts of money as they may deem adequate and necessary, for the purpose of co-operating with the officials of the State Board of Health in eradicating the Southern Cattle Tick, and in preventing contagious or infectious diseases of animals; or whenever funds for this purpose are raised by private subscriptions of individuals.

SECTION 3. The State Health Officer is hereby authorized and empowered to appoint officials of the United States Department of Agriculture detailed for co-operative work in the eradication of the Southern Cattle Tick, or the control or suppression of contagious or infectious diseases of animals in Florida, as

agents of the State Board of Health; Provided, that they act without pay from the State of Florida.

SECTION 4. This act shall become effective upon its passage and approval by the Governor, or upon its becoming a law without such approval.

Approved June 7, 1913.

In most cases, upon the completion of a dipping vat, representatives of the State Board of Health and of the Federal Government were present to superintend the preparation of the dip, the dipping of the cattle, and to deliver addresses. In the larger towns, our moving picture reel, showing the dipping of cattle, was run off in the theatres. In many cases, also, the Bureau of Animal Industry furnished an expert, Dr. A. C. Drach, to supervise the construction of the vat. Dr. Drach also made many trips with the Farmers' Institute corps, of the University, and delivered addresses.

The daily newspaper was also made a medium through which the educational campaign has been carried on, and the writer and others contributed a number of articles upon the subject to the columns of the Jacksonville, Tampa and Pensacola daily papers.

On December 17th, 18th and 19th, 1913, the Second Annual Meeting of the Florida Live Stock Association was held at the University of Florida, with a fair number in attendance. At the meeting, addresses were made upon many agricultural matters. The State Board of Health was represented by the writer, who delivered addresses upon "Hog Cholera," "Inter-State Shipments of Live Stock," and "Progress of Tick Eradication in Florida." Other addresses upon tick eradication were delivered by President C. F. Barber, and Drs. A. C. Drach and E. M. Nighbert, of the Bureau of Animal Industry. During the course of Dr. Nighbert's address, he said that the Federal Government had co-operated with the State of Florida for one year in its educational campaign, and while his department was satisfied with the progress made, it would be necessary to withdraw Dr. Drach from the State, as it was never contemplated keeping him in the State more than a year on educational work, and that when the State is ready to begin the actual work of tick eradication, along approved lines, Federal co-operation would be restored.

Of the thirty-two vats built in Florida, in 1913, nearly one-half were built without Government supervision. In fact, several were built without our knowledge, at the time. This is a favorable

symptom. It shows Floridians are intensely interested in tick eradication, and will not wait for any Government to do something for them that they think they can do for themselves. It shows that Floridians are a self-reliant people, and have not yet gotten into the habit of expecting something for nothing. Individuals will continue to build vats without help of any kind, because there are now a sufficient number in use to demonstrate that dipping cattle pays.

The difficulties of vat construction, the building of the forms and mixing the concrete, will be largely overcome by a firm which proposes to market a steel vat, already set up, of the same size and shape of the ordinary cement vat. This steel tank vat is sunk into the soil, and when the necessary fencing and cement floor dripping pen are installed, the outfit will fill all requirements. This tank will be sold for about a hundred dollars, and will largely solve the problem of building vats in those sections where the water table is near the surface. The address of this firm will be furnished on application.

In January, 1913, the writer was delegated by the Board to represent Florida before the Agricultural Committees of both Houses of Congress, at Washington, D. C., to help present the claims of the tick-infested States for an increased Federal appropriation. In common with the representatives of the other Southern tick-infested States, he made a statement of the conditions in Florida, and feels that he was proportionately instrumental in having the existing appropriation materially increased, and that, therefore, Florida should participate proportionately in the benefits of Federal co-operation.

While individuals may heroically tackle the proposition of ridding their herds of ticks, there can be no concert of action without government supervision. By this government supervision is meant supervision by national, state, county and municipal governments. Part of the responsibility for ridding the South of the tick, and thereby adding millions of dollars in value to southern agricultural interests, can not be permanently and successfully avoided by the various governments.

Tennessee is one State that has already come into her own by reason of having, after seven years of concerted effort, totally eradicated the tick. Mississippi is another State that is doing advance

work along the same lines. In Mississippi, the cost of eradicating the cattle tick has, in certain counties, been 50 cents per head. The average increase in the value of these cattle because of tick eradication is estimated at \$7 per head. In other words, these counties spent \$100,000 for tick eradication, and received at once a return of \$2,148,000 in the increased value of their cattle.

The following, from a Federal report upon the injury done hides by ticks, is germane:

According to figures gathered by one of the veterinary inspectors of the Bureau of Animal Industry, the presence of the tick among the cattle of the South not only lessens the value of the cattle on the hoof, but causes the gradings of hides that have been infested with ticks as No. 4 quality.

The same hide, if free from tick marks, would grade No. 2. The difference in price between these two grades of hides is 3 cents per pound. As the hide of Southern steers weighs about 42 pounds, the presence of the tick in the hide causes a loss in the hide alone of more than \$1.26 per hide. Government specialists point out that the cost of tick eradication is only 50 cents per head, so that if the counties make a systematic campaign to eradicate the tick, the increase in value of the hide alone would pay for the cost of tick eradication and leave the farmer a net profit of about 76 cents per hide.

The hide situation is becoming rather serious. A prominent tanner in Pennsylvania states:

"For the class of leather we make we prefer Southern hides for chrome on account of the close texture and fine grain, but on account of the ticks we have had to practically stop purchasing Southern hides."

This is particularly significant as the demand for chrome leather is increasing, so that the normal demand for Southern hides will be still further decreased.

A large percentage of the chrome leather now produced is finished with the grain left on so that all imperfections and tick marks on the grain side show very plainly. In the old days, when all the leather for uppers was made from bark-tanned stock, all leather was buffed and the grain was removed. For this leather tanners could use cheap hides that were covered with imperfections and tick marks and make fairly good leather. The situation today, as it has been explained, is very different, as the public is demanding more and more grained leathers for which large proportions of Southern hides will not be available until the tick is eradicated.

Tennessee will probably be the first state to be entirely free from quarantine for ticks. It already has eradicated the tick in 51 counties, and all that now remain under quarantine are parts of Marion, Wayne, Hardeman, McNairy and Decatur counties, and all of Hardin, Henderson and Chester counties. It is hoped that by September 1st these counties will be free from ticks and the entire State out of quarantine.

According to the specialists of the Department of Agriculture, it has cost less than 50 cents per head to eradicate the tick in Tennessee, and the cattle owners as a result have gained not less than \$7.00 per head, thus adding to the value of their stock. There are some 500,000 cattle in the counties already

free from ticks, and the immediate benefit to these owners has been not less than \$3,500,000. The cost of tick eradication has been only \$250,000, so that the investment paid for itself nearly 14 times over in a very short time. This does not include the additional profits which come from the fact that now that the tick is eradicated more cattle can be raised on each farm and that cultivated fields are made more productive by the increase of the amount of fertilizer now available.

Suppose, for the sake of being well within the estimate, that Florida cattle, on account of their supposed inferiority, were increased in value three dollars per head, as a result of tick eradication: It follows that our million head of cattle, as they exist today, would be increased in value \$3,000,000. Could the State afford to spend \$25,000 a year on such venture? We know, from experience, that with tick eradication, and with even tick control, comes a desire on the part of the stockman to improve his herd. We know that cattle weigh from 100 to 200 pounds more when kept free of ticks, and we also know that the meat sells for more, as also do the non-tick-bitten hides. All these items, when added to the improvement of agriculture brought about by tick eradication, brings the total value to a figure far in advance of \$3,000,000.00 for the future generation from the 1,000,000 head of cattle now in the State, even though the number is not increased, and the breed is not improved. It would pay the State to make a specific appropriation for eradicating ticks in some county that would agree to a "no-fence" law, as an object lesson. Hamilton County, from her geographical position and natural quarantine barrier—a river on three sides—would seem to offer the best facilities for such demonstration. However, any "no-fence" county would do as well. The "no-fence" law must come, as no approved tick-eradication work can be carried on without it.

EXTRA-STATE SHIPMENTS OF CATTLE.

Probably few citizens of the State realize the extent to which Florida is entering the cattle markets of the country. This has been brought about by the great demand for beef, and not because Florida cattle, generally speaking, could compete in the trade were the supply from more favored sections equal to the demand.

Thousands upon thousands of "scrubs" were shipped for feed-

ers and stockers to the Middle West last summer. That these shipments paid was proved by the fact that buyers returned for more and more. Such cattle, when put upon good pastures and fed by experts, put on about two hundred pounds more weight. When crossed with pure-bred bulls of the beef type, they produce a marketable half-breed of greater weight and finer beef. The same things can be done right here in Florida, and are being done now by some of our more progressive cattlemen.

This demand for Florida cattle has, naturally, caused an increase in the prices formerly obtained, and our cattle business has been stimulated to a considerable extent. As the demand for beef is ever on the increase, owing to increased population, and decreased production, our cattlemen need not fear the business, like so many others, will be overdone. What is wanted of the South is more cattle and better cattle. The United States, formerly an exporter of beef and cattle, has now become an importer of dressed meat. Beef is now actually being shipped from Australia and the extreme South American countries. Only the other day the office was notified of a large shipment of dressed beef from Montevideo, Uruguay, to Key West, Florida. Just how the Federal Government handled this shipment in the way of inspection has not yet been reported. To show the extent to which this is going on, the following is copied from "Weekly News Letter:"

IMPORTS OF CATTLE, MEATS, AND MEAT FOOD PRODUCTS DURING OCTOBER AND NOVEMBER, 1913.

Imported cattle inspected by the Bureau of Animal Industry, United States Department of Agriculture, during October and November, 1913, numbered 209,327 head, as compared with 72,420 for the corresponding period of 1912. All came from Canada and Mexico except 447 head of pure-bred cattle, for breeding purposes, imported from Great Britain. The imports were classified as follows:

October—For immediate slaughter, 73,166; as stockers and feeders, 54,565; for dairy and breeding purposes, 739; total, 128,470. November—For immediate slaughter, 39,086; as stockers and feeders, 41,548; for dairy and breeding purposes, 223; total, 80,857. The bulk of the slaughter cattle came from Canada while Mexico furnished over four-fifths of the stockers and feeders.

Imported meats and meat food products inspected during October amounted to 6,000,735 pounds, and in November to 11,792,576 pounds, making a total of 17,793,311 pounds for the two months. The bulk of this consisted of fresh and refrigerated beef, 16,082,578 pounds. There were 275,847 pounds of

other fresh and refrigerated meats. The remainder consisted of cured and canned meats, 1,169,517 pounds, and other products (sausage, compound, and oleo stearin), 265,369 pounds. Of the total, Canada furnished 8,098,197 pounds; Argentina, 6,209,700 pounds; Australia, 2,725,142 pounds; Uruguay, 559,843 pounds, and other countries much smaller quantities.

The South now has a golden opportunity to become a greater agricultural section, and should not lose the opportunity of going in largely for cattle. We have the best cattle feeds in the country, and the South is the only section where lands are sufficiently cheap for grazing purposes. Being thousands of miles nearer the great beef markets, we can compete with foreign-grown beef. Necessity will compel the South to grow more and better cattle, and more feeds for them, as the cotton yield and acreage decrease from the ravages of the cotton boll-weevil. With the advance of the cattle industry will come an increased demand, in Florida, as it has already in other Southern States, for the eradication of the cattle tick, that pest which is largely responsible for the stunted cattle seen on every hand. It has been the history of every Southern State that as soon as a man rids his place of ticks he begins to improve his breed. As soon as he has done this, the buyer views Southern cattle the same as those from other sections, and pays the price the improved animal is worth. When Florida grows the kind of cattle that make real beef, the buyers will soon find it out, and come here and pay what they are worth, just the same as they do now for our citrus fruits and vegetables.

The movement out of Florida last summer of vast numbers of "scrub" stock meant only that a beef famine is threatened. Just as soon as the farms in the Middle West are re-stocked, these inter-State shipments will cease, i. e., for that grade of cattle. The buyers will want better cattle, and will expect to pay top prices for them. By far the largest number of cattle shipped last summer was bought here by Miller Bros., owners of the 101 Ranch in Oklahoma. As the Georgia law prohibits the unloading of ticky cattle anywhere in that State, the shipments were made through West Florida, to destination, where they were held in quarantine and dipped twice in ten days to free them of ticks. In addition to the above shipments, many others were made that did not come under the notice of this office.

The number of common cattle shipped under the auspices of

the State Board of Health and the Federal Bureau of Animal Industry, was 2,161 head. These were all dipped once in Florida and again at a more northern point within the quarantined area. When cattle are dipped once in Florida, they are immediately dipped again upon arrival at the northern vat, and are then allowed to proceed to destination; thus saving a ten-days' feed bill, over the method of shipping out of Florida without dipping.

There were over 25,000 head of these common cattle shipped out last year. It may be interesting here to delve into a little ancient history of the cattle business in Florida. The customs records show the following exportations of cattle from the State in past years:

In 1866	-----	1,627 head
In 1867	-----	7,089 head
In 1868	-----	2,869 head
In 1869	-----	2,933 head
In 1870	-----	7,285 head
In 1871	-----	15,177 head
In 1872	-----	21,285 head

It is highly probable that most of these cattle went to Cuba. Note the great increase in 1870-72, due to the Cuban rebellion in those years.

SHIPMENTS OF PURE-BREDS.

In addition to the shipments of common stock, Florida has been doing a little business in the pure-bred line, and when Floridians realize the vast market now opened up in the South to supply the demand for pure-bred bulls for improving herds from which the tick has been eradicated, the few breeders now in this business will be greatly augmented.

Some ten years ago the owners of a large tract of land eight miles west of Gainesville, known as the Spring Park Stock Farm, purchased a large number of prize-winning Hereford bulls and cows out of the show ring. It was said this herd was the best, in point of breeding, that had up to that time been shipped into the tick belt, east of the Mississippi River, from the west. The venture was looked upon with misgivings, as it was supposed that such cattle could never do well in Florida. That these fears were unfounded has been proved by time. The herd is still a fine one, and

the progeny has done well, and brought good prices, as breeders. Unfortunately, Florida did not, for several years, offer the owner of these fine cattle much encouragement in the way of purchasing the increase. Most of the sales have been made into other States, and one bull was shipped to Guatemala.

Recently we were called upon to give bills of health for shipments of pure-bred stock from this farm to points in other States, where they went as foundation stock for new herds that are being formed. These shipments were most important from a breeding standpoint, and demonstrated that Florida can grow good cattle, and may some day become the breeding ground for the South. Mr. W. E. Coffin purchased twenty head of these fine young bulls for his stock farm, on an island off Darien, Ga. Miller, Patton & Co. bought a fine yearling bull, which went to Eutaw, Ala. T. J. Shingler, of Donaldsonville, Ga., purchased nine bulls. Mr. J. B. Simonton, of Micanopy, breeder of Jerseys, shipped a fine Jersey bull calf to J. J. Kilpatrick, of Brantley, Ala. All these animals being for breeding purposes, it was necessary for them to be certified as free from tuberculosis, and that they had been dipped to kill any ticks that might infest them, the laws of Georgia and Alabama requiring such certificates.

As further and more important and convincing evidence that the South is to be the future cattle-producing section of the United States, the following is reproduced from the "Weekly News Letter:"

A significant feature of the 1913 International Live Stock Exposition at Chicago was the fact that, for the first time, two herds of cattle from below the old Texas fever quarantine line were exhibited in competition with cattle from all over the United States and Canada. The competition was very keen, as all kinds of animals were exhibited. This exposition was one of the most successful held since its inception in 1910.

The Shorthorn herd of the Lespedza farm, of Hickory Valley, Tenn., won a number of prizes at this exposition. This farm, three years ago, was said to be the worst tick-infested farm in the State, but is now free of ticks and has been released from quarantine.

The farm was released from quarantine only a year ago. The herd of Herefords at the International which won the grand championship for Hereford bulls with Point Comfort 14th, were from La Vernet Stock Farm, near Jackson, Miss. This bull was bred and raised in Arkansas below the quarantine line. He won strictly on his merits as a Southern bull, bred, raised, and fitted on Southern feeds and pastures. A yearling bull by Point Comfort 14th at the Hereford Association's sale on Friday afternoon, December 5, sold for

\$575, and a bull calf by the same sire at the same sale for \$440. These facts show the possibilities of the South as a breeding ground for fine cattle.

REQUIREMENTS BY OTHER STATES FOR INTER-STATE SHIPMENTS.

If a Floridian wished to ship a domestic animal out of Florida into another State, and interviewed his railroad agent upon the subject, he would, if the railroad agent has been kept posted, be informed that he either could not ship the animal at all, or that he would have to get a bill of health from the State Board of Health.

If a man in Wyoming, or in any State, for that matter, asked his railroad agent about shipping domesticated animals into Florida, the agent could tell him, "All right, bring them along, Florida is a wide-open State for the entry of animals." Does this mean that Floridians want diseased animals shipped in? We should say no; but that is the effect of our apathy in the matter. Florida buys from elsewhere all her horses and mules, i. e., excepting the native pony seen on the farm. She probably does this to a larger extent than any other State. Then why should Florida not place the same restrictions on inter-state traffic in animals that other States have found wise? While it is true Florida prohibits shipments into the State of animals that are known to be diseased, the burden of proof rests in determining that the shipper knew the animals were diseased, and this would be, in most cases, impossible.

In order to prevent the shipment of diseased animals into the State, rules and regulations should be adopted by the State Board of Health requiring all animals shipped in to be accompanied with a bill of health from the State Veterinarian of the State in which the shipment originates. Within the last year, we have had many instances where such precautions would have saved the State money, as well as the shipper, and finally, the citizens of the State, as individuals. Recently this office was notified that a man from Jacksonville was endeavoring to buy, in Atlanta, fifty-three head of milch cows that had reacted to the tuberculin test, thus showing they had tuberculosis. Fortunately for Florida, the Georgia law required the slaughter of these animals, to determine whether or not their carcasses were fit for food, or would have to be entirely destroyed. Here was a case, where fifty-three milch cows would

have been unloaded on Florida, and sold at good prices, as healthy cattle, because a tuberculous cow frequently shows no evidence of disease, and may appear in the "pink of condition." The same man did buy and ship into the State milch cows that were not tuberculin-tested, and the chances are that some of them were tuberculous.

There were sixty-three cases of glanders in Florida in 1913, fifty-two of the cases occurring in Jacksonville and its suburbs. For a while it seemed that the disease might reach the proportions of an epidemic. There is good reason to believe that certain dealers in Jacksonville had shipped in one or more car-loads of "reactors"—animals that had been tested with mallein and had shown that they were afflicted with latent glanders. Such animals might look perfectly sound. The dealers here might have been innocent of wrongdoing; but the shipper at Chicago, for instance, would know these animals had "reacted," buy them for a song, and ship them to this customer in Florida at a good price. Such animals might not show the disease for a year, by which time all suspicion would be diverted from the dealer. The State paid its share of the loss, nearly \$5,000.00, for glanders brought into the State by such animals. Were the losses confined to the dealer probably no comment would be made; but the dealer rarely lost on the deal, as he had collected his price, in most cases, by the time the horse "came down" with the disease. The loss to the innocent buyer was not due entirely to the value of the animal, but account should be taken of interference with his business, hiring of teams to substitute while his remaining stock was being tested by the State, and the resulting mental worry.

One saw-mill firm deliberately shipped in from Georgia a car-load of glandered mules. They were so far gone with the disease that one died at the railroad station after unloading. They eventually all died, and infected several other animals belonging to the same firm. When I asked the State Veterinarian of Georgia how many more glandered animals he was going to ship us from his State, he replied: "Just as long as Florida will receive them; the original case in that outbreak came from Jacksonville, anyway."

It should be understood by the Board that, in adopting rules and regulations requiring all animals shipped into Florida to come with a bill of health, Florida is put to no expense worth mention-

ing. The trouble and expense is on the shipper and officials of the State in which the shipment originates. There are few States today that have not adopted uniform rules and regulations similar to those I here recommend, as is shown in the following:

SANITARY REQUIREMENTS OF THE STATES GOVERNING ADMISSION OF LIVE STOCK.

ALABAMA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for breeders, dipping for ticks; for hogs, health certificate.

ARIZONA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, held at destination, isolated for two weeks.

ARKANSAS—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, vaccination against cholera when for fairs.

CALIFORNIA—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate.

COLORADO—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, affidavit they are free from cholera.

CONNECTICUT—For horses, none; for cattle, health certificate and tuberculin test; for hogs, none.

DELAWARE—For horses, none; for cattle, tuberculin test; for hogs, none.

DISTRICT OF COLUMBIA—For horses, none; for cattle, health certificate and tuberculin test; for hogs, none.

FLORIDA—For horses, none; for cattle, none; for hogs, none.

GEORGIA—For horses, none; for cattle, health certificate, tuberculin test and dipping for ticks; for hogs, none.

IDAHO—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, must be immunized against cholera.

ILLINOIS—For horses, none; for cattle, none except Texas Fever; for hogs, none.

INDIANA—For horses, certificate for soundness; for cattle, tuberculin test; for hogs, health certificate.

IOWA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, health certificate and immunization against cholera.

KANSAS—For horses, health certificate and mallein test; for cattle, health certificate, tuberculin test and dipping for ticks; for hogs, immunization against hog cholera.

KENTUCKY—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate and vaccination of hogs for fairs.

LOUISIANA—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate.

MAINE—For horses, mallein test; for cattle, tuberculin test; for hogs, 90 days' quarantine on owner's place.

MARYLAND—For horses, health certificate; for cattle, tuberculin test; for hogs, health certificate.

MASSACHUSETTS—For horses, none; for cattle, health certificate and tuberculin test; for hogs, none.

MICHIGAN—For horses, none; for cattle, health certificate and tuberculin test; for hogs, none.

MINNESOTA—For horses, health certificate and mallein test; for cattle, tuberculin test; for hogs, health certificate.

MISSISSIPPI—For horses, health certificate; for cattle health certificate and tuberculin test; for hogs, health certificate.

MISSOURI—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs health certificate.

MONTANA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, health certificate.

NEBRASKA—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate.

NEVADA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, none.

NEW HAMPSHIRE—For horses, none; for cattle, health certificate and tuberculin test; for hogs, none.

NEW JERSEY—For horses, none; for cattle, health certificate and tuberculin test; for hogs, none.

NEW MEXICO—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, none.

NEW YORK—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate.

NORTH CAROLINA—For horses, health certificate for breeders; for cattle, health certificate and tuberculin test; for hogs, health certificate when for breeders.

NORTH DAKOTA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, health certificate and vaccination.

OHIO—For horses, none; for cattle, health certificate and tuberculin test; for hogs, health certificate.

OKLAHOMA—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, health certificate.

OREGON—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, health certificate.

TENNESSEE—For horses, health certificate, free from ticks; for cattle, health certificate and tuberculin test; for hogs, from stockyards for immediate slaughter only. (No cattle from Florida under any circumstances).

TEXAS—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate and vaccination.

UTAH—For horses, health certificate and mallein test; for cattle, health certificate and tuberculin test; for hogs, health certificate and vaccination.

VERMONT—For horses, health certificate and mallein test; for cattle, permit required; for hogs none.

VIRGINIA—For horses, none; for cattle, health certificate and tuberculin test; for hogs, health certificate.

WASHINGTON—For horses, health certificate; for cattle tuberculin test; for hogs health certificate.

WEST VIRGINIA—For horses, none; for cattle, none; for hogs, none. (Rules now being formulated in West Virginia).

WISCONSIN—For horses, health certificate; for cattle, health certificate and tuberculin test; for hogs, health certificate and vaccination.

WYOMING—For horses, health certificate, for cattle, health certificate and tuberculin test; for hogs, health certificate.

In connection with this article, the following recommendation made to Congress by the Secretary of Agriculture is of great interest and importance:

CONGRESS ASKED TO PROHIBIT MOVEMENT OF TICKY CATTLE BEYOND THE
QUARANTINED AREA.

The Secretary of Agriculture has recommended that Congress repeal the provision in the law of 1884, establishing the Bureau of Animal Industry which permits the shipment of cattle from the Texas fever region by rail to market for slaughter. This law was passed before the nature of the infection and its transmission by ticks were understood. The effect of the change would be to place Texas fever on the same basis as other communicable diseases and to prohibit the interstate movement of tick-infested cattle. Since the eradication of the ticks has been shown to be entirely practicable, there is no longer any good reason for allowing the shipment of ticky cattle outside of the quarantined area, especially since this is now attended with danger of reinfesting some of the territory that has been freed of ticks.

The Secretary's recommendation to Congress was unanimously indorsed by the Southern Cattlemen's Association at its recent convention in Memphis, and also received the approval of the United States Live Stock Sanitary Association at its recent Chicago meeting.

Under the proposed change in the law, cattle could be shipped interstate from the quarantined area only after they had been dipped or otherwise freed of ticks, but when so shipped they would be free from quarantine restrictions on account of Texas fever and would not have to be sold for immediate slaughter.

It is believed that this change would be of great advantage in promoting the eradication of the ticks in the South, and also in protecting the territory already freed.

On December 5th, 1912, the United States Live Stock Sanitary Association, then in annual session at Chicago, received and adopted the report of the committee appointed to draft regulations which should be uniform for all the States. These regulations are herewith presented with the recommendation that Florida adopt the same. It is also recommended that copies be sent to all State Veterinarians and Live Stock Sanitary Officials, as well as all transportation companies in the United States.

REPORT OF THE COMMITTEE ON UNIFORM REGULATIONS, PRESENTED TO AND
ADOPTED BY THE UNITED STATES LIVE STOCK SANITARY ASSOCIATION,
AT CHICAGO, DECEMBER 5, 1912.

SECTION 1. The importation by railroad, boat, in wagon, by express or other common carrier; on hoof or in any other manner, of live stock diseased or exposed to disease into the State of (Florida) is hereby prohibited; and to determine which fact the following regulations shall be observed by all persons, firms, transportation companies, corporations, express companies and other common carriers; State Veterinarians and all other officials, State and Federal, authorized to inspect and issue certificates of health for live stock.

SECTION 2. It is hereby ordered that any person, firm, corporation or any common carrier wishing to import bulls, work oxen or female cattle over six months old not intended for immediate slaughter, into the State of (Florida), must procure before shipment a health certificate and a tuberculin test chart in triplicate from a veterinary inspector of the B. A. I., the State Veterinarian or Assistant State Veterinarian, or a Veterinarian whose competency and reliability are certified to by the authorities charged with the control of diseases of domestic animals in the state from which the cattle are to be transported or moved. The original of this health certificate and tuberculin test chart must be attached to the waybill. The duplicate health certificate and tuberculin test chart must be sent to the State Veterinarian or proper official at destination in ample time to reach him before the arrival of the cattle.

The triplicate health certificate and tuberculin test chart must be sent to the proper state official at place of origin. The health certificate and tuberculin test chart must show that the cattle are free from Texas fever, ticks, tuberculosis and all contagious, infectious and communicable diseases. The tuberculin test* chart must show that at least three temperatures were taken before injection of tuberculin two to three hours apart, and five temperatures were taken after injection two hours apart, beginning ten hours after the tuberculin was injected.

SECTION 3. It is hereby ordered that any person, firm, corporation or any common carrier wishing to import horses, mules or asses into the State of (Florida) must procure before shipment or movement in any other manner a health certificate and a mallein test** chart in triplicate from a Veterinarian, Inspector of the B. A. I., the State Veterinarian or Assistant State Veterinarian, or a Veterinarian whose competency and reliability are certified to by the authorities charged with the control of diseases of domestic animals in the state from which the horses, mules and asses are to be transported or moved. The original, duplicate and triplicate copies of the health certificate and mallein test chart shall be handled as certificate and tuberculin test chart as provided for in Section 2. The health certificate and mallein test chart must show that the horses, mules, or asses are free from all contagious, infectious and communicable diseases, and the test chart must show that at least three temperatures two to three hours apart taken before injection and five temperatures were taken after injection two hours apart, beginning ten hours after the mallein was injected.

* Or other approved test.

** Ophthalmic test will be accepted.

SECTION 4. It is hereby ordered that any person, firm, corporation or any common carrier wishing to import sheep or goats in the State of (Florida) for purposes other than immediate slaughter, must procure before shipment or movement in any other manner a certificate of inspection issued by an inspector of the United States Bureau of Animal Industry, certifying that the sheep or goats are not affected with any contagious, infectious or communicable disease, including scabies, and that they have been dipped once within ten days of time of entry into the state in either a nicotine or lime-and-sulphur dip which has been approved by the United States Bureau of Animal Industry. Provided, however, that sheep and goats, not accompanied by certificate as above indicated, may be shipped by rail or boat to points within the State of (Florida) if billed to or through public stock yards where Federal government inspection is maintained, and there unloaded and dipped under the supervision of an inspector of the United States Bureau of Animal Industry.

SECTION 5. It is hereby ordered that any person, firm or corporation or any common carrier wishing to import swine into the State of (Florida) for purposes other than immediate slaughter must procure before shipment or movement in any other manner a health certificate in triplicate from a Veterinary Inspector of the B. A. I., the State Veterinarian or Assistant State Veterinarian or a Veterinarian whose competency and reliability are certified to by the authorities charged with the control of diseases of domestic animals in the state from which the swine are to be transported and moved. The original duplicate and triplicate copies of the health certificate shall be handled as certificates and tuberculin test chart as provided for in Section 2. The health certificate must show that the swine are free from all contagious, infectious and communicable diseases and have been immunized against hog cholera by the Dorset-McBride-Niles Serum not more than thirty days prior to shipment.

SECTION 6. It is hereby ordered that cars, boats and other vehicles used in the transportation of all live stock into or within the State of (Florida) shall first be cleaned of all litter, washed and disinfected with a mixture made with not more than 1 1-2 pounds of lime and 1-4 pound of pure carbolic acid to each gallon of water or liquid cresolis compositus (U. S. I.) six (6) ounces to every gallon of water.

LIST OF LIVE-STOCK MEN IN FLORIDA.

The following is a list of live-stock men in Florida, as compiled by the Animal Industry Department of the University of Florida:

CATTLE BREEDERS.

SHORTHORN CATTLE—Z. C. Chambliss, Ocala; J. R. Shuler, Bristol; A. L. Jackson, Gainesville; S. H. Gaitskill, McIntosh; Marion Farms, Ocala; Carson Bros., Kissimmee.

HEREFORD CATTLE—N. A. Callison, Gainesville; Magnolia Farms, Muscogee; J. R. Shuler, Bristol; W. A. Sessoms, Bonifay.

JERSEY CATTLE—Aug. van Epoel, Tampa; Miles Johnson, Tallahassee; E.

H. Gould, Oneco; Jack Camp, Ocala; A. L. Vidal, Gainesville; J. S. Goode, Gainesville; C. H. Simpson, Milton; William Edwards, Zellwood; R. C. Shaw, Quincy.

GUERNSEY CATTLE—A. L. Daughtry, Gainesville; J. S. Goode, Gainesville; C. L. Willoughby, Gainesville.

SWINE BREEDERS.

BERKSHIRES—William Edwards, Zellwood; Oscar Williams, Muscogee; Richard C. Shaw, Quincy; W. A. Sessoms, Bonifay.

DUROC JERSEYS—W. B. Willett, Maitland; H. H. Whitworth, Ocala; J. C. Henry, Live Oak; C. H. Simpson, Milton; L. B. Thompson, Pensacola, R. No. 1.

SHEEP BREEDERS.

Walker Bowers, Freeport; Dan King, Louanna; W. A. McCollum, Laurel Hill; Eugene Miller, Freeport; Alex Steele, Point Washington; Hutch Cawthon, DeFuniak Springs; John McCollum, DeFuniak Springs; John McSween, DeFuniak Springs; Dyer & Daniels, Wetappo; W. M. Gist, McIntosh; Ridge & Gale, Belleview; B. P. Keep, Boardman; George E. Mead, Cantonment.

RANGE CATTLE AND MISCELLANEOUS.

Adams, F. L., Tampa; Ayer, Alfred, Ocala; Beville, E. M., Gainesville; Baird, Ed., Gainesville; Beville, John Jr., Gainesville; Barton, R. L., R. No. 4, Gainesville; Battenau, W. J., Bristol; Barry, W. T., Wade; Badger, James, Berlin; Bass, Rull, Kissimmee; Bass, Tom, Kissimmee; Bugbee, F. E. Hastings; Bradshaw, J. P., Archer; Bailey, Asa, Wauchula; Blitch, J. S., Montbrook; Brantley, R. A., Tampa; Barco, B. B., Box 320, Tampa; Bryon, Willie, R. No. 3, Tampa; Barco, A. B., Boulevard Box 140, Tampa; Branch, C. L., Plant City; Brodly, W. G., R. N. 3, Ybor City; Brooks, S. H., Zuber; Beville, Henry, Bushnell; Brown, Sam, Sopchoppy; Barber, C. F., McClenny; Barrs, J. J., Micanopy; Berry, A. E., Bowling Green; Carmichael, C., Ocala; Cromartie, D. S., Reddick; Cannon, O. P., Gainesville; Coe, Ray M., Hastings; Caskine, L. J., Dade City; Coachman, S. S., Clearwater; Calhoun, J. C., Perry; Conway, Charles, West Toco; Chambliss, Flake, Greenwood; Coxetter, S. V., Lloyd; Chaires, E. P., Old Town; Cunningham, Nelson, R. No. 3, Tampa; Colclough, C. A., Gainesville; Croft, J. N., Trilby; Chaires, McQueen, Old Town; Clark, D. A., Martel; Carr, W. J. S., Kissimmee; Cleveland, A. C., Fort Pierce; Carter, Graham, Levyville; Davis, J. R., Bartow; Deadman, Wm., McIntosh; Drew, Frank, Live Oak; Drummond, John W., Janney; Dudley, Harvey, Gainesville; DeBush, E. F., Tampa; Dix, S. G., Ybor City; Dobson, Elijah, Olustee; Dupont, C. A., Hastings; Edwards, S. J., Fort White; Edwards, D. G., Gainesville; Eville Bros., Palatka; Epperson, J. B., Williston; Feaster, A. J., R. No. 5, Gainesville; Fonda, John L., Madison; Forbes, Mr., R. F. D., Dover; Fletcher, T. A., Mallory; Fulford, C. A., Bonifay; Fletcher, J. N., Mallory; Goodbread, A. S., Lake City; Grantham, R. M., Pine Level; Godwin, W. R., Whittier; Gaskins, L. J., Dade City; Green, P. W., Prof., Pedro; Gibbons, G. H., Archer; Gunn, S. J., Otter Creek; Harrison, James, Micanopy; Howell, J. C., Anthony; Hiers, J. M., R. No. 1, Trenton; Highsmith, W. H., R. No. 1, Trenton; Hardee, E. R., R. No. 2, Trenton; Hardee, Silas, R. No. 2,

Trenton; Hardee, John, R. No. 2, Trenton; Hendry, J. E., Fort Myers; Henderson, R. A., Fort Myers; Haile, Evans, Gainesville; Hughes, D., Ponce de Leon; Haynesworth, J. E., Haynesworth; Howell, C. B., Martin; Howell, E. L., Anthony; Hancock, J. S., Miakka; Howard, J. B., Gainesville; Holly, J. H., Gainesville; Harrison, G. W., R. No. 5, Gainesville; Hardy, G. C., Florahome; Henry, J., Ybor City; Henderson, W. T., Lynne; Hudson, J. W., Dade City, R. F. D.; Imeson, George, Tampa; Ives, A. M., Jacksonville; Johnson, Walter H. Pine Barren; Jolly, M. E., Orange Heights; Jones, Drew, Williston; Keen, J. M., Lakeland; Knight, C. L., Tampa; Knight, L. W., Alachua; Kincaid, W. C., Gainesville; Kincaid, John, Gainesville; Lauchlin, A. J., Fairfield; Lee, John M., Kissimmee; Lightsey, W. A., Bartow; Lowman, B. B., Raleigh; Lightsey, W. E., R. F. D. 3, Tampa; Lightsey, L. L., Tampa; Lewis, W. H., Fort Meade; Langford, R. G., Fort Meade; Mann, H. T., Mannville; McDonald, C. H., Cottage Hill; McKinnon, Theo. DeFuniak Springs; McCaskill, A. P., Tallahassee; McKinstry, W. R., Gainesville; McDonald, S. D., Gainesville; McDonald, T. E., R. No. 2, Gainesville; McElroy, W. B., R. No. 1, Trenton; McElroy, C. W., R. No. 1, Trenton; McCollough, J. H., Orlando; Meffert, J. M., Ocala; Mills, George F., Cottage Hill; Mikesell, B. P., St. Cloud; Mitchell, D. C., Gotha; Mizell, M. F., Pine Level; Miller, J. W., Kissimmee; Matthis, W. H., Mallory; Mobley, T. E., Hastings; Mobley, H. J., Dade City; Murphy, Garrett, Bradentown; Mitchell, J. J., Elfars; Moyer, S. N., R. F. D., Tampa; Matlock, S. S., Tampa, Tribune; Mobly, Thomas, Alachua; Means, S. D., Hague; Means, L. E., Gainesville; Mansfield, G. H., Gainesville; Means, T. B., R. No. 4, Gainesville; Meder, W. F., Foley, Ala.; Marshall, J. E., R. No. 3, Trenton; Miller, Eug., Freeport; Whitmyre, B. D., Milton; Mann, George W., Bartow; Miller, L. P., Berlin; Neubeck, J. P., Palatka; Osteen, K. E., Osteen; O'Berry, J. F., Kissimmee; Paisley, John, Williston; Perryman, A. D., Janney; Page, S. H., Bartow; Phelps & Morrison, Bartow; Page, T. W., Bartow; Phifer, W. B., Gainesville; Prince, E. E., Rochelle; Pearson, E. C., Alachua; Porter, Dr. F. W., Tampa; Parrish, H. J., R. F. D. 2, Tampa; Parker, Will, Tampa; Prevatt, J. B., Largo; Perkins, George B., Tallahassee; Rowe, B. H., McClenny; Roberts, A. H., Fort Myers; Redding, R. H., Ocala; Rooney, J. D., Ocala; Robles, F. M., Judge, Tampa; Rawlerson, K. B., Fort Pierce; Register, L. C., R. No. 4, Jasper; Roberts, George, No. 3, Tampa; Roe, C. O., Clermont, Ala.; Ramsey, James P., Gainesville; Roach, J. M., Williston; Rawls, J. N., Williston; Register, W. R., Woodville; Ray, Walter, Leroy; Rawls, I. N., Montbrook; Randall, G. I., Williston; Revels, E. H., Bristol; Sistrun, M. M., Montbrook; Smith, Dr. H. C., Madison; Studstill, H., R. No. 2, Trenton; Stringfellow, J. D., Gainesville; Stevens, C. W., Alachua; Sitterlind, J. E., St. Andrews; Summerlin, Jasper, Bartow; Skipper, David, Wauchula; Skipper, Lee, Zolfo; Stidham, C. M., Bartow; Smith, Henry, Wauchula; Skipper, E. E., Bartow; Smith, G. W., Wauchula; Shaw, J. L., Alachua; Smith, J. L., Alachua; Stephens, C. W., Alachua; Sparkman, C. R., Waldo; Shands, T. W., Gainesville; Strickland, W. A., Gainesville; Simmons, Irvin, LaGrange; Seward, W. H., Arcadia; Strom, S. H., Juniper; Spencer, H. F., Tallahassee; Sims, J. A., Bonifay; Smith, J. C., Center Hill; Sampson, F. G., Quincy; Turner, Dr. W. L., Elzey; Towles, W. H., Fort Myers; Taylor, W. L., Quincy; Thomas, W. R., Gainesville; Triplett, S. J., Kissimmee; Thomas, E. A., Arcadia; Tucker, W. P.,

Arcadia; Van Dozor, W. L., Kissimmee; Varn, Berry, Brooksville; Wicoff, W. W., Taft; Wilson, W. D., Bartow; Wilder, S. H., Plant City; Walker, Hirsch, Wacissa; Woodruff, Seth, Orlando; Wilson, Chauncy, Brooksville; Whitmire, Barney; Whitfield, W. H., R. F. D., Tampa; Williams, J. E., Ybor City; Wood, W., R. F. D., Ybor City; Worthington, J. E., Tampa Times; Wilder, R. L., Tampa; Worth, Fred, Tampa; Williams, Charles, Alachua; Wood, H. D., Evinston; Williams & Phillips, Zolfo; Watts, N. F., Bartow; Wood, J. N., Levyville; Wells, T. L., Chipley; Zetrouer, A. B., Rochelle; Zetrouer, Andrew J., Gainesville.

DAIRYMEN.

GENERAL.

W. P. Beard, Quintette; Mr. Bradford, Bradfordville; C. M. Burroughs, Bay City; J. A. Caple, Miami; D. G. Edwards, Gainesville; L. G. Hine, Miami; B. H. Hinson, Hanson; W. R. Newell, Leesburg; E. C. Beuchles, Anthony; Millwood Farm Co., Reddick; Jones & Goodwin, Winter Haven; H. H. Witherington, Apopka; Stafford Burgis, Leesburg; A. M. Flanery, Ocala; S. D. McDonald, R. No. 2, Gainesville; George H. Mansfield, Gainesville; A. H. Willet, Orlando; J. D. Mackey, Cantonment, R. No. 1; J. T. Ransley, Cantonment, R. No. 1; T. E. Maxey, Cantonment, R. No. 1; C. C. Simpson, Cantonment, R. No. 1; J. A. Stewart, Cantonment; R. No. 1; W. B. Weaver, Cantonment, R. No. 1; H. H. Whitworth, Ocala; W. G. Tilghman, Palatka; W. L. Taylor, Quincy, Box 359; J. T. Hall, Hastings.

ST. PETERSBURG DAIRYMEN.

P. L. Miller, 40; Henry Belcher, 35; D. L. Sellers, 60; W. J. Wells, 29; D. E. Houser, 12.

DAIRYMEN OF JACKSONVILLE.

G. F. Abarding, care Tennessee Produce Co.; J. W. Arpen, Route 3; J. S. Brandies, Box 881; J. W. Church, 1304 W. Church street; J. C. DeBevoise, Route 4; Firdenn & Mills, Route 4; W. H. Greek, Route 4; G. C. Jennings, Route 3; S. W. Matt, Route 1; George L. Miller, 1217 Rushing street; Edward Niles, Route 1; H. J. Pound, South Jacksonville; G. H. Sprague, Myrtle avenue and Church street; A. Studebaker, Box 863; Fred Williams, 1113 W. Duval street; H. C. Arpen, Route 3; Frank Bartholf, Route 1; Jennie Clarkson, Route 2; Thomas Dansen, Box 285; I. E. Glover, Route 1; James Jennings, Route 2; V. C. Johnson, Dinsmore, Fla.; J. R. McKinley, Box 476; A. J. Mosley, Route 4; W. J. Nolan, Route 1; Thomas Smith, Route 2; W. J. Smith, Highway Branch P. O.; W. T. Stewart, Tallyrand avenue; R. Winkleman, General Delivery.

PENSACOLA DAIRYMEN.

Adams, Mrs. DeL.; Anderson, A. J.; Adams, M.; Bayliss, J. E.; Burns Dairy; Boyer, H. H.; Brainard, T. M.; Berchire, A. O.; Bradley & Wright; Brown, W. E.; Cronise, C. B.; Coons, J. W.; Curtis, William; Davis, C. T.;

Duncan, H.; Freeman, Mrs. C. E.; Garfield, W. S.; Hall, J. W.; Haynes, J. E.; Horrell, Ira G.; Howell, I. C.; Jefferson, O. W.; Jernigan, R. F.; Jones, S. J.; Lambert, A. C.; Moore, W. W.; Mason, W. E.; Magnolia Dairy; Marble, J. W.; Myrtle Grove Dairy; Quina, A. L.; Robinson, Rix M.; Reeves, G. W.; Ridley, R.; Roberts, E. J.; Saunders, E. E.; Still, J. R.; Stewart, F.; Sheppard, W. C.; Simon, W. O.; Stephenson, A. W.; Stidown, Doc; Tait, H. E.; Tracy, W. T.; Though, Alex.; Vontura, D.; Wilkins, Estelle; Wright, J. A.; Williams, J. M.; Williams, M. C.; Williams, E. B.; Wilson, Mrs. L. E.; Wedmyer, C. C.

TAMPA DAIRYMEN.

J. D. Gaetano, Lake avenue and Fifteenth street, 16 cows.
D. Testasica, Fifteenth street, Ybor City, 23 cows.
R. Ferlita, Fortieth street, Ybor City, 24 cows.
N. Disalve, Fortieth street, Ybor City, 15 cows.
G. Guarliardo, Fortieth street, Ybor City, 25 cows.
N. Disalve, Fortieth street, Ybor City, 15 cows.
S. Digiaca, Fortieth street, Ybor City, 12 cows.
S. Dine, Fortieth street, Ybor City, 12 cows.
T. Spoto, Oak Park, R. F. D., 42 cows.
A. Caccitore, Oak Park, R. F. D., 18 cows.
J. Caccitore, Oak Park, R. F. D., 18 cows.
B. Fernandez, Oak Park, R. F. D., 25 cows.
J. Gonzalez, Oak Park, R. F. D., 20 cows.
B. L. Sumner, Oak Park, R. F. D., 11 cows.
J. W. O'Berry, Oak Park, R. F. D., 26 cows.
V. Coniglio, Oak Park, R. F. D., 34 cows.
J. Peromie, Oak Park, R. F. D., 21 cows.
Walter Johnson, Oak Park, Ybor City, 28 cows.
Joe Cutro, Oak Park, Ybor City, 30 cows.
A. Capitano, Oak Park, R. F. D., 40 cows.
D. Valiti, DeSoto Park, R. F. D., 15 cows.
G. Galasso, Michigan avenue and Forty-third street, 17 cows.
A. Spoto, Oak Park, R. F. D., 24 cows.
Joe Bigico, Oak Park, R. F. D., 30 cows.
Antonuo Massora, Oak Park, R. F. D., 30 cows.
F. Diaz, College Hill, R. F. D., 75 cows.
P. Lalla, College Hill, R. F. D., 10 cows.
O. Romano, College Hill, R. F. D., 40 cows.
Ferlita & Reina, Twenty-fourth avenue, R. F. D., 70 cows.
G. Parlafino, Twenty-third avenue, R. F. D., 12 cows.
F. M. Sprague, Boulevard, R. F. D., 40 cows.
A. B. Farco, Grand Central avenue, R. F. D., 30 cows.
H. V. Barco, Grand Central avenue, 47 cows.
F. S. Bray, Rocky Point, R. F. D., 80 cows.
R. S. Clark, 316 Twiggs street, R. F. D., 40 cows.
S. L. Lyman, North Florida avenue, R. F. D., 40 cows.
S. T. Baker, Nebraska avenue, R. F. D., 40 cows.
W. M. Drew, Nebraska avenue, R. F. D., 21 cows.
A. A. Fisher, Buffalo avenue, R. F. D., 35 cows.

D. S. Fisher, Buffalo avenue, R. F. D., 30 cows.
 D. S. Fisher, Buffalo avenue, R. F. D., 48 cows.
 W. A. Fisher, Buffalo avenue, R. F. D., 38 cows.
 T. W. Lane, Buffalo avenue, R. F. D., 80 cows.
 C. C. Nelands, Nebraska avenue, R. F. D., 80 cows.
 J. W. A. Norton, Hanna avenue, R. F. D., 40 cows.
 A. J. Youngblood, Hyde Park, R. F. D., 28 cows.
 J. Zamilito, West Tampa, R. F. D., 15 cows.
 R. Caetano, West Tampa, R. F. D., 30 cows.
 D. F. Fonti, West Tampa, R. F. D., 40 cows.
 G. Nicolletto, West Tampa, R. F. D., 40 cows.
 R. Fernandez, West Tampa, R. F. D., 35 cows.
 T. Alferio, Thirty-third street, Ybor City, 20 cows.
 G. Alferio, Thirty-third street, Ybor City, 20 cows.
 D. Mulitello, Thirty-third street, Ybor City, 24 cows.
 L. Coletto, Thirteenth street, Ybor City, 15 cows.
 Mrs. M. Varoni, Lake avenue and Fifteenth street, 20 cows.
 G. Bartolotto, Lake avenue and Fifteenth street, 20 cows.
 M. Phillips, Twenty-seventh avenue, R. F. D., 10 cows.
 S. Glafagl Ione, 1804 Ninth avenue, Ybor City, 10 cows.
 G. Triano, Fifteenth street and Fifth avenue, R. F. D., 15 cows.
 Guisippi Bejicue, Twelfth street and Forty-first street, R. F. D., 12 cows.
 Tampa Stock Farm, South Tampa, R. F. D., 50 cows.
 W. J. Hancock, Nebraska avenue, R. F. D., 7 cows.
 G. B. Carter, Police Station, R. F. D., 7 cows.
 Kosa, Palmetto Beach, R. F. D., 4 cows.
 W. M. Holland, Florida avenue, R. F. D., 3 cows.
 (NOTE—All the dairymen addressed Ybor City, or R. F. D., should be addressed 1804 Ninth avenue, as they all call here daily.)

COUNTY CATTLE IMPROVEMENT CLUBS FORMED DURING 1913:

Alachua County—A. L. Jackson, Pres., Gainesville.
 Baker County—Elijah Dobson, Pres., Olustee.
 Columbia County—A. S. Goodbread, Pres., Lake City, R. F. D. 5.
 DeSoto County—W. H. Seward, Pres., Arcadia.
 Hillsborough County—F. L. Adams, Sec'y, West Tampa.
 Leon County—A. P. McCaskell, Pres., Tallahassee.
 LaFayette County—W. H. Matthis, Sec'y, Old Town.
 Marion County—John L. Edwards, Pres., Ocala.
 Osceola County—E. L. Lesley, Pres., Kissimmee.
 Pasco County—H. J. Mobley, Pres., Dade City.
 Polk County—W. H. Lewis, Pres., Ft. Meade.
 St. Johns County—A. C. Dupont, Pres., Hastings.

LIVE-STOCK ESTIMATES FOR FLORIDA FOR 1913

The live-stock estimates as compiled by the U. S. Dept. of Agriculture for the year 1913, and further elaborated by the writer, are as follows:

	No. in 1913	Number Jan. 1 1914	Value each in 1913	Value each Jan. 1 1914	Total Value in 1913	Total Value Jan. 1, 1914	Increase in value	Increase in number
Horses -----	53,000	55,000	\$118.00	\$122.00	\$6,254,000	\$6,710,000	\$456,000	2,000
Mules -----	26,000	27,000	152.00	168.00	3,952,000	4,536,000	584,000	1,000
Dairy Cows -----	123,000	128,000	36.00	38.00	4,428,000	4,864,000	436,000	5,000
Beef Cattle -----	766,000	735,000	12.50	14.00	9,345,000	10,070,000	725,000	(Decrease 31,000)
Swine -----	878,000	904,000	5.90	6.00	5,180,000	5,424,000	244,000	26,000
Sheep -----	119,000	118,000	2.10	1.90	250,100	224,000	(Decrease 21,700)	(Decrease 1,000)

	In 1913	Jan. 1, 1914	Total increase value of livestock in 1913
Total value of horses and mules -----	\$10,206,000	\$11,246,000	
Total value of cattle -----	13,773,000	14,934,000	
Total value of all live-stock -----	29,409,000	31,828,000	\$2,419,000

Jacksonville, Fla., January 1, 1914.
DR. JOSEPH Y. PORTER,
State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I take pleasure in transmitting the annual reports for 1913, of Assistant Veterinarians Munsell and DeMilly, with the recommendation that they be published as part of this Annual Report of the Veterinary Division.

Yours very truly,

CHARLES F. DAWSON,
Veterinarian.

REPORT OF DR. W. A. MUNSELL

ASSISTANT VETERINARIAN.

Green Cove Springs, Fla., January 1, 1914.
DR. JOSEPH Y. PORTER,
State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I herewith submit a report of my work as Assistant Veterinarian, for the year 1913.

My services began April 15th, 1913. From that date to December 31st, inclusive, I have been detailed fifty-eight times upon cases as follows:

To investigate for glanders, 25 times.
To administer hog cholera serum and appoint agents, 12 times.
To certify to dipping cattle for shipment, 9 times.
To special investigation for disease, including tick fever, etc., 10 times.
To give tuberculin test, 2 times.

Complete details are given in tabulated form following.

Respectfully submitted,
W. A. MUNSELL, D. V. M.,
Assistant Veterinarian.

DATA ON GLANDERS CASES

DATE	PLACE	OWNER	No. ANIMALS	DIAGNOSIS	DISPOSITION
May 20	Jacksonville	Louis Baker	1 horse	Clinical Pos.	Condemned
June 7	Argyle	C. A. Jackson	1 horse	Negative	Condemned
11	W. Palm Beach	E. L. Wade	1 horse	Clinical Pos. Test Pos.	
13-17	Wellborn	Smithson & Co.	2 mules	Negative	
18	Jacksonville	St. Cleaning Dept.	112 mules	Negative Mallein Tested	
18-20	Jacksonville	Ice Delivery Co.	18 mules	Negative Mallein Tested	
20	Jacksonville	Consolid. Grocery Co.	2 horses 10 mules	Clinical Pos. Mallein test.	2 condemned
21	Marietta	W. J. Laumore	1 horse	Clinical Pos.	Condemned
30-31	Jacksonville	City Prison Farm	14 mules	Negative	Retested
July 1-3	Jacksonville	St. Cleaning Dept.	6 mules	Clinical Pos. Test Pos.	Condemned
29-31	Jacksonville	Ice Delivery Co.	1 horse	Negative	
Aug. 1-2	Forest City	Gustaf Bjorkander	1 horse, 1 mule	Clinical Pos. Test Pos.	
6-7	Bonifay	Ed. Miller	1 horse	Negative	
7	Marietta	G. W. Barber	1 horse	Negative	
7	Jacksonville	J. Griffin	1 horse	Negative	
16-18	So. Jacksonville	P. Monday	1 horse	Negative	
Sept. 13-14	Ehren	P. Weeks	4 mules	Negative	
Oct. 8-9	Jacksonville	H. S. Lockwood	29 horses	Tested	2 condemned
18	Jacksonville	St. Cleaning Dept.	14 mules	Negative	Not retested
22-23	Kissimmee	F. Franklin	1 horse	Clinical Pos.	Condemned
24	St. Augustine	H. H. Hood	1 horse	Negative	
27	Jacksonville	P. A. Bush	1 horse	Negative	Retested
Nov. 6	Jacksonville	Houraney	2 horses	Negative	
17	Duval	J. J. Dottery	1 horse	Negative	
	Fruitland Park	C. M. Perry	1 horse	Negative	

DETAILS OF HOG CHOLERA WORK

DATE	COUNTY	TOWN	No. HOGS	AMT. SERUM USED	AGENT APPOINTED
April 21	Duval	Bayard	25	500 cc.	H. L. Manners
May 22	Marion	Burbank	25	500 cc.	J. B. Haney
May 5	Suwanee	Live Oak	50	1000 cc.	A. C. Johnson
15	Alachua	Micanopy	75	1500 cc.	D. R. Zetrouer
Aug. 1	Putnam	Keuka	25	(Left 1500 cc.)	G. R. Price
Sept. 13	Clay	Green Cove Springs	10	500 cc.	C. R. Hall
Nov. 3	Sumpter	Oxford	25	250 cc.	T. E. O'Dell
6	Duval	Broward	10	500 cc.	J. S. Higginbotham
12	Herrando	Brookville	25	2000 cc.	J. S. Downing
18	Osceola	Kissimmee	75	250 cc.	E. L. D. Overstreet
22	Marion	Spart	10	(Left 3000 cc.)	W. Lufman
29	Alachua	Gainesville	--	(To demonstrate serum-simultaneous treatment for B. F. Williamson)	

CATTLE CERTIFIED FOR INTERSTATE SHIPMENT

DATE	SHIPPING PLACE	NUMBER	SHIPPER	DESTINATION
May 7-9	Kissimmee	1047	E. L. Lesley	Kansas
June 21	Kissimmee	36	L. E. Minx	Ohio
June 27	Kissimmee	998	E. L. Lesley	Kansas
July 5	Tallahassee	50	C. B. Elam	East St. Louis
Oct. 9-10	Kissimmee	36	E. L. Lesley	Kansas
Dec. 8	Gainesville	(Did not ship on account of Tennessee Quarantine)	N. A. Callison	Georgia
Dec. 22	Gainesville	20	N. A. Callison	Alabama
29	Gainesville	1	N. A. Callison	Georgia
30	Micanopy	9	N. A. Callison	Alabama
		1	J. B. Simonton	

INVESTIGATION OF TICK FEVER AND SPECIAL CASES

DATE	PLACE	OWNER	ANIMALS	DIAGNOSIS
July 3-4	Gainesville	A. L. Jackson	Cattle	Tick Fever
Aug. 4-5	Gainesville	Jackson & Kincaid Bros.	Cattle	Tick Fever and Hookworm
Sept. 8	Lake Helen	Mrs. Watson	Cattle	Tick Fever
16	Alachua	T. A. Mobley	Cattle	Food Poison
23	Micanopy	R. M. Chamberlain	Cattle	Food Poison
25	Georgiana	F. W. Munson	Cattle	Hookworm
Nov. 20-27	Kissimmee	C. A. Carson	Cattle	(Inspection cattle)
Dec. 15	Hastings	Bugbee	Cattle	Tick Fever
April 17-19	Glen St. Mary	G. L. Tabor	6 cows	Tuberculin tested, Negative
Dec. 30-31	Micanopy	J. B. Simonton	17 Cattle	Tuberculin tested, Negative

REPORT OF DR. J. W. DE MILLY

ASSISTANT VETERINARIAN.

January 1, 1914.

DR. JOSEPH Y. PORTER,

State Health Officer, Jacksonville, Fla.

DEAR DOCTOR:—I respectfully submit herewith a report of my work as Assistant Veterinarian for the year 1913.

In addition to my reports of administration of hog cholera serum and the appointing of hog cholera agents, I assisted in the tick eradication educational work in various ways.

The following is a list of hog cholera agents appointed:

County.	Town.	Agent.
Alachua—Archer	-----	W. J. Jones
Bradford—Stark	-----	D. W. Alvarez
Clay—Middleburg	-----	W. W. Hamilton
Clay—Middleburg	-----	M. M. West
Citrus—Citronelle	-----	R. L. Priest
Citrus—Citronelle	-----	W. F. Sutton
Columbia—Lake City	-----	S. W. Lamb
Duval—Jacksonville	-----	John Farmer
Hamilton—White Springs	-----	W. M. Bennett
Leon—Bloxham	-----	D. W. Stoutamire
Leon—Chaires	-----	W. J. Graham
Liberty—Sumatra	-----	R. D. Fryer
Levy—Rosewood	-----	M. B. Coarsey
Marion—Bay Lake	-----	E. F. Wilson
Marion—Cottonplant	-----	Judge Beal
Polk—Bradley Junction	-----	J. C. English
Polk—Bradley Junction	-----	W. H. Surency
St. Lucie—Sebastian	-----	W. F. Boughman
St. Johns—Dupont	-----	Dr. D. B. Brown
St. Johns—Dupont	-----	E. Z. Boor
Washington—Panama City	-----	D. R. McDaniels

The following is a report of work accomplished in the administration of hog cholera serum:

Date	County and Town	No. Hogs Treated	Serum Used
Jan. 12	Alachua—Newberry -----	8	200 cc.
Jan. 17	Bradford—Stark -----	9	200 cc.
Jan. 17	Bradford—Stark -----	6	150 cc.
Jan. 19	Clay—Middleburg -----	6	150 cc.
Jan. 23	Hamilton—P. O. Lake Park, Ga. -----	92	1900 cc.
Feb. 5	Leon—Tallahassee -----	16	395 cc.
Feb. 12	Leon—Springhill -----	36	1000 cc.
Feb. 19	Leon—Tallahassee -----	4	135 cc.
Feb. 19	Leon—Tallahassee -----	30	670 cc.
Feb. 22	Citrus—Inverness -----	26	590 cc.
Feb. 23	Columbia—Lake City -----	41	895 cc.
Feb. 27	Hamilton—White Springs -----	6	130 cc.
March 1	Polk—Bradley Junction -----	55	1325 cc.
March 1	Polk—Bradley Junction -----	32	715 cc.
March 6	Liberty—Sumatra -----	36	850 cc.
March 14	Alachua—Archer -----	28	800 cc.
March 20	Washington—Panama City -----	72	1875 cc.
March 20	Washington—Panama City -----	8	170 cc.
March 28	Leon—Tallahassee -----	22	655 cc.
March 28	Leon—Tallahassee -----	22	530 cc.
April 10	Jefferson—Lloyds -----	13	330 cc.
April 10	Jefferson—Lloyds -----	25	480 cc.
April 17	Osceola—Kissimmee -----	5	250 cc.
April 22	Leon—Tallahassee -----	11	245 cc.
May 8	Leon—Tallahassee -----	10	290 cc.
June 23	Levy—Williston -----	33	885 cc.
July 13	Wakulla—Helen -----	27	685 cc.
July 28	Leon—Chaires -----	34	810 cc.
July 28	Leon—Chaires -----	16	560 cc.
Aug. 3	Columbia—Lake City -----	76	1500 cc.
Aug. 3	Columbia—Lake City -----	21	365 cc.
Aug. 13	Marion—Cottonplant -----	21	505 cc.
Aug. 25	St. Johns—Dupont -----	5	110 cc.

Yours very truly,

J. W. DE MILLY,

Assistant Veterinarian

APPENDIX

ADDRESS OF THE
CHAIRMAN OF THE SECTION OF PREVENTIVE
MEDICINE AND HYGIENE

DR. JOSEPH Y. PORTER

SOUTHERN MEDICAL ASSOCIATION

AT

LEXINGTON, KY., NOV. 17-20, 1913

(Printed by the Southern Medical Journal, Feb., 1914.)

In bidding you welcome to the section of Preventive Medicine, permit me to express my appreciation and gratification at the goodly number present. It is reasonable that we should expect to have with us health officers, and members of Boards of Health; nevertheless, it is likewise gratifying to see that there are many here, whose chosen line of professional study does not particularly direct thought to subjects which are only discussed in a gathering of this character. It is a matter of great gratification to note the interest, which is yearly increasing, in the subject of preventive medicine, and more than this, the universal acknowledgment by the laity that to prevent sickness is equally as noble and Christlike a calling, as it is to cure; a paradoxical admission, it is true, to the usual conception of the layman, who views this activity of the doctors "as working themselves out of a job." This is not true, however, and may be said to be a positive contradiction, for in well governed communities, where sanitary requirements are rigidly enforced and followed by the people, the medical practitioner thrives better financially than where little or no heed is given to tenets for good health.

So, after all, the sanitarian and the general practitioner of medicine have no differences to meet or harmonize, in the method of

each to earn a livelihood, for in their own peculiar way, they are aiding humanity by helping to prolong life.

I, therefore, bid you, one and all, a cordial welcome to this section, earnestly praying that your deliberations may result in great good, and that by insisting upon practical application of ideas and principles, which have been gained by experience and investigation, we may retain the confidence we have inspired, in what we have taught, and to so continue to teach in the future, that the most ignorant cannot fail to imbibe a few truths; seeds, as it were, dropped by the wayside, to spring up to fruitful harvest in years to come. For, my co-laborers, we are not working solely for the good of the present generation, for it is in the future "coming forth" of men and women, that the optimist in sanitation hopes and looks forward to a realization of cherished ideals. It is a homely adage, but a true one, that: "It is difficult to teach old dogs new tricks," and it is equally true, that in the application of this saw, we can scarcely hope, in the older persons, to overcome all of the false notions or prejudices, or whatever term you may choose to call them, of the fixed ideas of the "grown-ups" of today, which in early life they imbibed. It is in their children that we hope for future good results of our teaching of today.

The last year has yielded a fairly good harvest in practical methods, and I may say, discoveries, which contribute to the health benefit of the human family. The United States Public Health Service, always active and always alert, has subscribed in a large measure to the advancement of the cause. Its officers have answered appeals from the states where help has been asked for, to investigate outbreaks of sickness, which required more time, and a greater attention to detail work, than the average health officer of a municipality could give. The published findings of these studies have been interesting, and what is more, greatly instructive. I think that we all will voice our appreciation of the help which we have derived from this Service. The states themselves, especially those connected with our own Association, have not been tardy in pushing measures tending to advance the health interest of the human family; and by press service, literature on special subjects, and by bulletins and monographs, state and municipal organizations have cir-

culated useful and practical information on methods and measures to preserve health and prevent sickness.

It is believed that a better condition of sanitation throughout the Southern States has resulted from these educational methods. I know that this is true as regards my own State, Florida, for never in the history of this State, has there been such an active interest manifested in health matters as at the present time, and this interest is not one of mere curiosity to gratify an inquisitiveness into the unusual; but a real desire to obtain information on subjects of practical methods of healthful living, which will be to the advantage of both the individual and the community. When the people begin to ask questions, and to show an eagerness for information on this or that subject relating to rightful and proper living, then the Health Officer is encouraged in his efforts, and with increased enthusiasm tries to present more forcefully, sanitary facts which experience has proven to be effective and fruitful and consequently of lasting benefit. An inquiring community is sure to be composed of an intelligent group of thoughtful citizens, especially so as regards matters which affect the health of themselves or their families, and I may add, too, the general welfare interest of the business of the city, town or section of the country. A community of this kind fills the health officer with zeal and enthusiasm in his work, and stimulates his faculties to a still greater endeavor.

It is the attitude of the indifferent and apathetic community which sends a chill down the spinal column of the health officer. A community which treats the whole subject of sanitation as a fad of the doctors, and does not believe in germs and "such like nonsense," is a difficult proposition, and a discouraging problem for the health officer to deal with: a community that insists that malaria comes from a miasm, and that mosquitoes have nothing to do with chills and fever; who, if considering the subject of health at all, construes sloth and civic indifference to appearances as indicating sanitary nuisances, or matters conducing to ill health, and ignores the weightier matters of typhoid prevention. Communities of this description dishearten all efforts for their welfare or health betterment.

When small communities aspire to city airs, actuated by a wish for police protection as well as pride of locality, the citizens usually

organize as a municipality with the various offices pertaining to such a government. Very often the prime motive which prompts to such action is called into existence by a feeling on the part of thoughtful citizens of the place that if sanitary conditions are to be bettered, then some form of government is absolutely needed to enforce any requirements of healthful living. But very often, the mistake is made by a sanitary committee of a council, or the health officer, if one should be appointed, to think it their duty to indulge in theory of disease, and disease-producing agents, rather than to appreciate those causes of possible sickness which lie almost immediately under their eyes. Again, too, unsightliness and litter are confounded with, or thought to be, sanitary nuisances, but they are not, for such carelessness is in no way inimical to health.

Theorizing on matters pertaining to sanitation, grasping at the shadow and letting go the substance, gains nothing in the way of confidence of the people or of practical benefit to the individual or community, but does earn for the health officer a reputation of being a visionist and an unsafe teacher. In a period of forty odd years, engaged in health work, I have run up against many of these kind of men, who, although anxious to do their duty, seem to think that they cannot accomplish the full quota of work, and earn their little stipend (because health officers, as a rule, are the poorest paid of any of the city officials, for the amount of genuine hard work that they do), unless they are working out some speculative idea in sanitation or chasing a rainbow of impossible cause of disturbed health in the community in which they live. And not only do inexperienced health officers make the mistake of entertaining fads, but the solid men of the town or community, as Councilmen, will wrangle and dispute over trivial matters, such as cutting weeds, to destroy a thought-to-be miasma producing malaria, when a weightier subject, such as preventing a spread of typhoid fever by screening surface closets against flies, gives them no uneasiness or concern. One would think that in this age of scientific progress a case of leprosy or smallpox would scarcely disturb the placidity of the waters of a well directed health organization, but is it so? Do we not every day, see communities become excited over either one or the other, on the slightest pretext or occasion, and what is more to be deplored and condemned, vociferously demand a quaran-

tine against such persons, forgetting that in the case of smallpox and diphtheria absolute immunity is given by vaccination and by the use of antitoxin, and furthermore, that leprosy is only slightly contagious.

As much as I regret to say so, too many health officers give encouragement to such crude and false ideas and notions. Moreover, I am inclined to believe that too much importance of late has been given for a purely theoretical advantage to the cause of public health, to the supposed "carriers" of certain diseases, those persons who are otherwise in health, have certain disease germs in their system, and I would sound a note of warning against too great a popularizing of this idea. I am not disputing the fact that there are individuals who harbor in their bodies certain disease germs, but if, at the same time, they show no clinical symptoms of the disease of which these germs are the distinguishing feature, the query to my mind is this: "Are these germs always virulently active and a source of danger to those who may come in contact with such individuals, who are otherwise healthy?" Theoretically, and if obeying the dictum of the laboratory, these individuals should be isolated even when accidentally met with, and excluded from public places and the rest of well mankind. Practically, is this a sensible and reasonable procedure? Is it possible, or will it be to the advantage of the cause of public health, to enforce such a rule? When it is estimated that in the city of Washington, D. C., alone, the number of typhoid carriers reaches approximately three hundred and more, who are not known, and who can never be detected except by accident, and that in the great city of New York, based on population, it is also estimated that there are about ten thousand carriers of typhoid walking the streets, plying their usual occupations, and totally unconscious of being a menace to public health, it can plainly be seen that to segregate or isolate one or two of such cases will be very much like guarding the spigot, while the bung-hole is open. As I understand the present-day teaching in this respect, bacteriologists basing their opinions altogether on their laboratory findings, and doctrinal teachings, would seemingly exclude every individual having a diphtheria bacillus in the mouth or throat, from general mingling with the public, irrespective of clinical or epidemiological history. Practically and in every day life and liv-

ing, this will be found an impossible procedure, and it would seem to be unsound teaching, because it has been found that an examination of the throats of individuals taken haphazard, in a large percentage of cases will show the presence of diphtheria bacilli, without any clinical symptoms being present, or the individuals themselves being aware of the fact or experiencing any discomfort or in the slightest degree cognizant of being otherwise than in perfectly good health.

I am not so certain, and in fact very much doubt, whether the germs of some diseases are without certain changes capable of an infectivity in other persons, which will produce the pathological phenomena resulting in clinical symptoms, especially denotive of the particular deviation from normal health. Perhaps I do not make myself quite as clear in this statement as I would like to, and if said in another way, it will be that certain bacilli which we consider pathogenic when found in persons otherwise healthy, and having no clinical evidence of the disease of which these germs are thought to be productive, are harmless except under conditions which a specific action induced by a lowered condition of the vital force of the individual may call into play. Whatever may be the reason, and speculative sanitation should not be considered, I am opposed to any unnecessary inconveniencing of the public, entailing oftentimes hardships and expense, when the public health will not be materially guarded thereby.

I very much doubt, too, whether the campaign against the common drinking cup as the means or cause of spreading disease is based upon actual facts obtained by experience, and is not a speculative menace in a great measure. If the purpose of the ban now placed upon the common drinking cup is to induce cleanliness, and is to be an educational measure in that direction, then I am heart and soul with the movement. The evidence of disease contamination by the common drinking cup is lacking to a great degree. Certainly as regards tuberculosis, because the Secretary of the Anti-Tuberculosis Association of the United States, writes me there are no records in his office of the disease ever having been propagated or spread by the use of the common drinking cup. A search of literature elsewhere gives the same negative finding. If the vessel is washed out and cleansed after each using, I fail to see

the danger lurking in its use, that does not also hold good for drinking vessels in hotels, restaurants or homes, after they have been used and cleansed.

I may be voicing a heresy, for which I shall be criticised and maybe lose my "Union Card," but believing in practical sanitation, and in the application of reasonable and rational methods for the preservation of health which an intelligent public will accept and adopt, and not class as a fad, I cannot subscribe to impracticable methods based too often on speculation, and theory.

Just a word more, because I do not intend that this paper shall be more than a welcome and a presentation of some thoughts for the section to think over—accept or reject in their wisdom. It is indeed a matter for devout thankfulness to note the interest which yearly is increasing in efforts towards suppressing tuberculosis in this country, especially that form of the disease generally known as "pulmonary consumption." Organizations for this purpose, national, state and local, have done an immense amount of good work in this direction, and statistics show that if only a slight decrease in number of cases and mortality can be claimed, because of these efforts, still the disease is not on the increase and the general conditions for control seem to be more promising. What I would direct your attention to in connection with the management of this disease, is, the difference in manner of management which must be followed in the different sections of this vast country. A method followed in the colder sections of the United States is totally unsuited for the warmer latitudes, and as this Association is composed mainly of southern medical men, I wish to suggest this thought; That whatever of good or of possible benefit we may hope to give the consumptive of our section, it must be obtained from the open air treatment altogether, and in this particular the country south of Mason and Dixon's line is better adapted for the undertaking than the more northern climates. I believe that sanatoria for consumptives must be of the open air construction to be of any material benefit, either in prolongation of life, promoting a more comfortable existence, or the hope of possible cure, and I am opposed to buildings of brick or of wood, for the purpose. These are nothing more than hospitals for the treatment of this class of sufferers. Sanatoria projected on the general plan of the Fort Stanton system

of tent houses, where the patient virtually lives in the open air, are better calculated to do good—make conditions more comfortable and to hold out a hope of permanent benefit.

Brick and wooden constructed buildings for treatment of this class are little more than hotels for the well-to-do, and cheap boarding houses for the poorer classes. They are places for seclusion and segregation of those whose affliction will not in one instance admit them to fashionable tourist resorts, and in the other instance poor farm institutions for the indigent "down and outs." In my opinion, neither are efficient or effective of good to the unfortunates who are forced to enter them.

I have noticed in my reading quite recently that in Massachusetts there is a disposition to suspend the construction of any more sanatoria for the indigent class suffering from pulmonary tuberculosis, on the ground that it is impossible to gather in all who are suffering, and that those who are unknown and uncontrolled by the State are creating conditions which it is impossible to counteract, and that the expense, therefore, of maintaining tuberculosis sanatoria is vastly out of proportion to any benefit which can be hoped to be gained in the construction of additional buildings for this purpose.

Just here, let me pause to read you what Dr. Henry P. Walcott, Chairman of the State Board of Health of that State, is reported as having lately given expression to:

"Henry P. Walcott, Chairman of the State Board of Health, put a quietus on all further talk about 'compulsory isolation' of consumptives in sanatoria in Massachusetts by pointing out, yesterday, to the recess committee on tuberculosis, that there are at least 40,000 cases of identified tuberculosis in this State. The impossibility of attempting to treat all those cases, with perhaps 30,000 other cases of suspected infection, in state sanatoria, was self-evident. Dr. Walcott also made it plain that the present State law leaves it wholly to the discretion of the State Board when, if ever, a city or town shall be ordered to build a sanatorium, and also that it is only upon the direct refusal of a city or town to comply with an order, that any penalty can be imposed. Inasmuch as no time is specified in the law, within which a city or town shall build, it is clear that unless it can be shown to the courts that a community has 'refused'

or 'neglected' to build, after a specified order, the present law imposes no penalty.

"On the whole, the testimony of the State's greatest expert was very damaging to the cause of the advocates of 'compulsory isolation.' After Dr. Walcott had completed his testimony, the scheme for crowding a large percentage of the population into sanatoria appeared both ridiculous and hysterical."

Open air sanatoria require large areas and landed reservations to accommodate races and sexes, with additional space to devote to mild and moderate exercise and occupation in horticultural or agricultural employment. I believe agreeable occupation to be an important factor of treatment. Those who are physically able, should be given gentle occupation, for the treatment of pulmonary tuberculosis is, and must be, both psychological as well as material if decided benefit is looked for. It is in a great measure for this reason that I am opposed to hospitals—for that is all the house sanitarium is—for the care of the pulmonary tuberculous. In the outdoor management of these cases the patient is given or offered agreeable occupation without undue exertion, and the diversion of mental faculties from his own trouble and anxiety. There is in the open or outdoor treatment an opportunity to get away from that distress of mind which constantly hangs over the head of each sufferer, for in so doing, the opportunity for reciting to each other the distresses which oftentimes are greatly exaggerated and dwelt upon, are lessened. Without mental occupation and diversion systematically applied, with, of course, good food and abundance of space for lung exercise, I am doubtful of any benefit which can be gained anywhere by the consumptive.

Where it is not possible for the State to provide ample space for the needed accommodation of races and sexes in an open air sanitarium for the indigent cases—for it is only this class that the tax payers can be called upon to provide for, and then only on the ground that unprovided for they are a serious menace to the health of the rest of society—then I am of the opinion that the State or municipality had better abandon altogether the idea of sanatoria, or a general sanitarium, and substitute therefor a corps of trained nurses, to travel the State, hunt out the pulmonary consumptive, and by advice and continuous assistance, teach the individual sick one,

as well as the other members of the family in methods best adapted to present conditions, which will aid the sufferer to more comfort, and perhaps ultimate cure, and at the same time protect the other members of the family from contagion. In the long run, I believe that this system will prove to be more effective in helpfulness to the consumptive and a decidedly more economical method of rendering assistance. In the rural districts the open air treatment of pulmonary consumption can easily be carried out under proper instruction, if the individual is willing to be taught and will follow advice. A floored tent some little distance from the home building, comfortably fitted up so as to be home-like in appointments, is all that is necessary in the way of outdoor requirements, for palatable food can be served from the home and without danger to the health of other members of the family. They can, under proper and well observed conditions, be companionable to the invalid loved one, thus robbing the partial isolation of homesickness, the curse which falls upon all those suffering from this disease who are separated from relatives and friends. May I ask you to seriously consider this proposition? Calculate the expense, and compare it with the cost of maintaining a large sanitarium on the open-air plan. I have no data on hand to offer you in this line, but my opinion is, that at the end of five years it will be found that more sick of this disease have been reached, and benefited, by advice and practical training, than could have been gathered together in a hospital or even in an open-air institution; and with this advantage, that they will not be separated from loved ones, and the companionship of those who help to make life agreeable while it lasts. Neither do I believe that under the instruction which will be given by a nurse of the corps such as I have outlined the duties of, that the presence of the individual sufferer will be a menace to the rest of the family. I am looking forward to Florida's taking a positive stand in this direction within the next twelve months, by inaugurating a system such as I have suggested, and hope to be able to also give you a favorable report on the utility of the measure when we next meet.

At the last meeting of the Southern Medical Association in Jacksonville, I had the pleasure of expressing to the Section on Hygiene and Preventive Medicine, some views that I entertained in regard to practical sanitation; things people should know, and be

taught, and contrarywise, what their minds should be disabused of, concerning false ideas and antique notions. Now with your permission I propose to continue this line of thought, because I believe no more important work can be done by the health officer of today, than to teach practical and common-sense methods in sanitary management, and to emphasize especially the advantage which education and educational measures will have in spreading this knowledge among the people. Even at the risk of ringing a chestnut bell on myself and becoming tiresome in repeated pleading for this most important manner of diffusing useful information to the public, I feel, nevertheless, that in addressing this Section of Preventive Medicine I can do no better service to the Association at large, or to offer the individual members and attendants on this section better advice, than to impress upon them this truth, that the health officer, to command the confidence of a community and the respect of the citizens, must be practical in his views and unmistakably clear in the manner in which he expresses them. Principles of sanitary knowledge lie fundamentally in cleanliness: It is the keystone by which the arch of general healthful living is firmly supported. Without strict attention to these tenets the whole structure of sanitation must fall. It can be seen, therefore, that to be successful in helping a community or any of its citizens, and directing them how to avoid conditions which impair health or health conditions, the health officer must be a close student of human nature, with senses so acute that each individual case or individual himself can be analyzed for such needed attention, counsel or advice, as his temperament ostensibly requires. Neither communities nor citizens will place their faith in theoretical health officers, and the general public is right in thereby withholding their trust; for there is certainly enough to be done and worked out on this earth, without seeking for problems in the clouds.

The distinguished Health Officer of Winnipeg very truthfully says: "No sanitary improvement worth the name will be effective, whatever acts you pass or whatever powers you confer on public officers, unless you create an intelligent interest in the public mind."

So it is apparent, that faith and confidence in the clear-headedness of sanitary teachers must first be earned before the public will accept from them any instruction or teachings.

The whole question, therefore, of public health hinges upon the individual in his relation to society. Effort should be made to impress this fact, that the individual is responsible not only to himself, but to the community in which he lives, has an obligation to fulfill to his neighbor, and that too much dependence should not be placed upon the parental authority or assistance of government, either of state or nation, to correct errors of living which the individual himself can easily overcome by exercising common sense and reason.

Simmered down, the dogmas of healthful living find their birth in education, and any future benefit to the human kind, whatever it may be, which sanitarians hope to bring about, must come from correct impressions made on children in their education, and the school room must be the soil in which the seeds of this knowledge are to be sown.

My distinguished predecessor, Dr. Dowling, as Chairman of this section, has done more in his State to bring about a clearer conception of hygienic requirements than could have been effected by tons of distributed literature. The eye will take in and receive impressions that will be lasting and will be remembered, which the ear oftentimes fails to appreciate the importance of; and it is by means such as he employs, pictures graphically shown upon the screen, charts, models, and clearly represented facts, which explain in themselves more emphatically than one can tell of, that we may expect the future improvement of the race.

The moving picture reels showing the disgusting habits of the fly, the evolution of malaria and filaria, and other parasites of the mosquito, are educational methods which impress the thinking observer, and are important lessons which, when seen, are learned, not soon to be forgotten.

In a cursory, and perhaps disjointed, way I have tried in my suggestions to point out the great need of practically applying our knowledge of sanitary science. In dealing with the public what we positively know about preserving health or preventing disease or destroying disease agents, let us tell, and explain and take the public into our confidence concerning all that we really do know; but by all means, avoid speculation and theorizing, for nothing destroys faith in a health officer's judgment so much as a wavering

and unstable opinion based on speculation and theory. I have purposely embraced in this argument two disputed methods of disease transmission because, as a menace to health, and to the well, there is much conjecture and guess work. No one can confidently state that bacilli carriers in a non-virulent state and without producing clinical symptoms, are capable of creating in a well and non-carrier person, the peculiar disease of which they stand as a type, and the evidence is wanting, likewise, so far as the common drinking cup is concerned. To exclude both on the common ground of "injurious to health" without proof, is to seriously inconvenience the public in its freedom of action. After all is said and done, human nature is, and always will be, human nature to the end of time, and although easily molded to public opinion, when rationally presented with facts, yet, when the curtailment of rights is asked for by the sanitarian and the request is based merely upon supposition and theory, then this same yielding public becomes adamant in opposition and loses faith in the correctness of judgment and wisdom of the would-be-teacher. Therefore, if the advice of one who has been engaged in this work for nearly half a century is worth considering, I say to you, be practical in methods which you offer as safeguards of the public health. In other words and homely said: "Keep both feet on the ground."

INDEX TO ANNUAL REPORT

A

	Page
Accounts, Auditing and	37
Acts:	
Cattle Tick Eradication	29, 224
Pollution of Underground Waters	30
Address of the Chairman of Section of Preventive Medicine and Hygiene, Southern Medical Association, 1913.....	255
Agents:	
County Farm Demonstration.....	205
Hog Cholera, Appointments of.....	250
Hog Cholera, List of.....	202
State Board of Health, Reports of.....	137, 140
Alachua County, Report of Health Conditions.....	120
Apalachicola, Report of Sanitary Conditions.....	100
Appendix	253
Assistants to the State Health Officer, Reports of.....	73, 80, 86, 89, 94, 103, 114, 124
Assistant Veterinarians, Reports of.....	247, 250
Auditing and Accounts.....	37
Auditor, Report of.....	37

B

Bacteriological Laboratories:	
Extension of	169
Patronage, by towns, 1913, Central Laboratory.....	180
Patronage, by towns, 1913, Tampa Laboratory.....	187
Report of Bacteriologist, Pensacola Laboratory.....	188
Report of Bacteriologist, Tampa Laboratory.....	183
Report of Senior Bacteriologist (Central Laboratory).....	161
Report of State Health Officer	25
Bacteriological Specimens:	
Comparative Statement of the Six Principal Diseases for which Exami- nations have been made, 1910 to 1913.....	178
Examination of, in Central Laboratory, 1913 (Statement).....	172
Examination of, in Pensacola Laboratory, 1913 (Statement).....	190
Examination of, in Tampa Laboratory, 1913 (Statement).....	185
Bacteriologists, Reports of	161, 183, 188
Baker County, Report of Health Conditions.....	121
Bay County, Report of Health Conditions.....	84
Bill for Free Transportation to Employees of State Board of Health.....	29
Bradford County, Report of Health Conditions.....	122

	Page
Brevard County, Report of Health Conditions.....	110
Building and Grounds, Administration.....	9
C	
Calhoun County, Report of Health Conditions.....	84
Carriers, Diphtheria	165
Cattle:	
Breeders, List of	239
Certified for Interstate Shipment.....	249
County Cattle Improvement Clubs Formed during 1913.....	244
Dipping Vats Built in Florida, 1913.....	223
Extra-State Shipments of	228
Imports of Cattle, Meats and Meat Food Products.....	229
Pure-Bred, Shipment of	231
Range and Miscellaneous, List of Owners.....	240
Tick Eradication	29, 224
Tick Eradication Education, A Year's Progress in.....	222
Tick Fever, Investigation of, and Special Cases.....	249
Ticky Cattle, Congress Asked to Prohibit Movement of, Beyond Quar- antined Area	237
Cerebro-Spinal Meningitis	19
Charts.....(following 64), 65, 68,	69
Chickenpox, Record of Cases in Central District.....	116
Children, Crippled	145
Cholera, Hog. (See Hog Cholera).	
Citrus County, Report of Health Conditions.....	91
Clay County, Report of Health Conditions.....	108
Climatological Monthly Summary, Florida, 1913.....	69
Columbia County, Report of Health Conditions.....	122
Communicable Diseases. (See Diseases).	
County Farm Demonstration Agents.....	205
Crippled Children	145
D	
Dade County, Report of Health Conditions.....	137
Dairymen:	
General	242
Jacksonville	242
Pensacola	242
St. Petersburg	242
Tampa	243
DeSoto County, Report of Health Conditions.....	77
Diphtheria:	
Carriers	165
Cases Central District, Record of.....	116
Diagnoses by Laboratories by Counties and Months (Insert) preceding	65

	Page
Epidemic at DeFuniak Springs, Report of.....	96
Report of State Health Officer.....	12
Dipping Vats, Cattle—Built in Florida, 1913.....	223
Diseases, Communicable:	
Cases, Western District, Record of.....	80
Distribution, by Towns, as Diagnosed by Laboratories, 1913.....	175
Prevalence of, by Months and Counties (Insert) preceding.....	65
Report of State Health Officer.....	12
Venereal, Specimen Examination	168
Districts of the State, Sanitary.....	9
Drinking Cup	165
Duval County, Report of Health Conditions.....	108
E	
Embalmer's Examiners, Report of Board of.....	153
Escambia County, Report of Health Conditions.....	84
Examination:	
Assistants to the State Health Officer. (See Sanitary Districts).	
Embalmers'	153
Water	168
Expenditures in Detail.....	38
F	
Finances	32
Flies, Seasonal Prevalence of, in Florida.....	66
Florida, Map of, Showing Sanitary Divisions (Insert) preceding.....	71
Franklin County, Report of Health Conditions.....	100
Fumigations by Sanitary Patrolman, Pensacola.....	80
G	
Gadsden County, Report of Health Conditions.....	99
Glanders:	
Cases of, during 1913.....	220
Cases, Data on	248
Diagnosis of, in Human.....	169
New Test for	218
Report of State Health Officer.....	27
Report of Veterinarian	217
H	
Hamilton County, Report of Health Conditions.....	122
Health Conditions, Report of, by Counties:	
Alachua	120
Baker	121
Bay	84
Bradford	122

	Page
Brevard	110
Calhoun	84
Citrus	91
Clay	108
Columbia	122
Dade	137
DeSoto	77
Duval	108
Escambia	84
Franklin	100
Gadsden	99
Hamilton	122
Hernando	91
Hillsborough	77
Jackson	83
Jefferson	99
Lake	91
Lee	78
Leon	98
Levy	123
Liberty	100
Madison	99
Manatee	78
Marion	90
Monroe	86
Nassau	140
Orange	92
Osceola	92
Palm Beach	111
Pasco	93
Pinellas	78
Polk	79
Putnam	109
Santa Rosa	82
Seminole	92
St. Johns	109
St. Lucie	111
Sumter	92
Suwanee	123
Taylor	99
Volusia	110
Walton	82
Washington	83
Hernando County, Report of Health Conditions	91
Hillsborough County, Report of Health Conditions	77
Hog Cholera :	

STATE BOARD OF HEALTH OF FLORIDA 273

	Page
Details of Work	248
Report of State Health Officer. (See Veterinary Work).	
Report of Veterinarian	195
Hog Cholera Agents :	
Appointments of	250
List of	202
Hog Cholera Serum :	
Administration of	206, 251
Distribution of, in Florida, 1913	206
Facts About, and Its Distribution	201
Free Distribution of	196
Manufacture of, Financial Report, Michigan	200
Memorial, U. S. Live Stock Sanitary Association	198
Hosford, Report of Sanitary Conditions	100
Hookworm :	
Diagnoses by Laboratories, by Counties and Months (Insert preceding 65)	
Report of State Health Officer	20
Specimen Examination	168
Hydrophobia :	
Deaths from, in Florida, 1913, Case Record	58
Explanatory Notes	58
Report of State Health Officer	21
Treatment Administered for its Prevention, 1913, Case Record	54
Treatment Administered for its Prevention, 1913, Distribution of Cases by Counties and Towns	60

J

Jackson County, Report of Health Conditions	83
Jefferson County, Report of Health Conditions	99

L

Laboratories. (See Bacteriological Laboratories).	
Lake County, Report of Health Conditions	91
Lee County, Report of Health Conditions	78
Legislation, Public Health	28
Leon County, Report of Health Conditions	98
Levy County, Report of Health Conditions	123
Liberty County, Report of Health Conditions	100
Librarian, Report of	50
Library	50
Literature. (See Publications).	
Live Stock :	
Estimates for Florida for 1913	245
Regulations, Uniform, Report of Committee, U. S. Live Stock Sanitary Association	238

	Page
Requirements by Other States for Interstate Shipments of.....	233
Sanitary Requirements of the States Governing Admission of.....	235
Live Stock Men in Florida, List of.....	239
M	
Madison, Report of Sanitary Conditions.....	99
Madison County, Report of Health Conditions.....	99
Malaria:	
Diagnoses by Laboratories by Counties and Months (Insert preceding 65)	65
Report of State Health Officer.....	15
Seasonal Prevalence of, in Florida.....	65
Specimen Examination.....	166
Manatee County, Report of Health Conditions.....	78
Marion County, Report of Health Conditions.....	99
Measles.....	19
Meeting of the State Board of Health, Reorganization, Extracts from	
Minutes of.....	22
Minutes, Extracts from, Reorganization Meeting State Board of Health.....	22
Monroe County, Report of Health Conditions.....	86
Monticello, Report of Sanitary Conditions.....	99
Morbidity Statistics.....	48
Mosquitoes, Seasonal Prevalence of, in Florida.....	66
N	
Nassau County, Report of Health Conditions.....	140
O	
Office Routine.....	24
Orange County, Report of Health Conditions.....	92
Osceola County, Report of Health Conditions.....	92
P	
Palm Beach County, Report of Health Conditions.....	111
Pasco County, Report of Health Conditions.....	93
Pasteur Treatment, Administration of, 1913, by State Board of Health.....	54
Pathological Tissues, Specimens of.....	169
Perry, Report of Sanitary Conditions.....	99
Pinellas County, Report of Health Conditions.....	78
Polk County, Report of Health Conditions.....	79
Pollution of Underground Waters.....	30
Precipitation, Monthly Normal and Mean, Florida, 1913.....	68
President's Letter of Transmittal.....	
Preventive Medicine and Hygiene, Address.....	255
Publications, Publicity and.....	23
Publicity and Publications.....	23
Putnam County.....	109

	Page
Q	
Quincy, Report of Sanitary Conditions.....	99
R	
Rabies. (See Hydrophobia).	
Receipts.....	39
Resignations. (See Sanitary Districts).	
S	
Sanitary Conditions. (See Health Conditions).	
Sanitary Districts of the State.....	9
Sanitary Patrolman, Fumigations by, Pensacola.....	80
Santa Rosa County, Report of Health Conditions.....	82
Scarlet Fever:	
Cases, Central District, Record of.....	116
Report of Detail to Hosford.....	101
Report of State Health Officer.....	20
Seminole County, Report of Health Conditions.....	92
Seminole Indians, Report of Investigation as to Health Conditions.....	124
Senior Bacteriologist, Report of.....	161
Serum, Hog Cholera. (See Hog Cholera Serum.)	
Sheep Breeders.....	240
Shipment of Cattle, Extra-State. (See Cattle).	
Shipment of Live Stock. (See Live Stock).	
Smallpox:	
Cases, Central District, Record of.....	116
Cases Reported in Florida, 1913.....	63
Report of State Health Officer.....	13
Smallpox Tides..... (Insert following 64)	
Southern Medical Association, Address of Chairman of Section of Preventive Medicine and Hygiene, 1913.....	255
Specimens. (See Bacteriological Specimens).	
St. John County, Report of Health Conditions.....	109
St. Lucie County, Report of Health Conditions.....	111
State Health Officer, Report of the.....	1
Statistics:	
Morbidity.....	48
Subsidiary Statistical Data.....	53
Vital.....	41
Sumter County, Report of Health Conditions.....	92
Suwanee County, Report of Health Conditions.....	123
Swine Breeders.....	240
T	
Tables:	
Bacteriological Specimen Examination.....	172, 185, 199
Bacteriological Specimen Examination, Comparative Statement.....	178

	Page
Bacteriological Specimen Examination, Cost of.....	26
Bacteriological Laboratories, Patronage of, by Towns.....	180, 187
Cattle Certified for Interstate Shipment.....	249
Cattle Exports, Florida, 1866-72.....	231
Cattle Tick Fever, Data on.....	249
Climatological Monthly Summary, Florida, 1913.....	69
Communicable Diseases, Distribution of, by Towns.....	175
Communicable Diseases, Prevalence of..... (Insert preceding 65)	80, 116
Communicable Diseases, Record of Cases.....	145
Crippled Children.....	(Insert preceding 65)
Disease, Prevalence of.....	38
Expenditures, 1913.....	80
Fumigations by Sanitary Patrolman, Pensacola.....	220
Glanders, Cases in Florida, 1913.....	248
Glanders, Data on Cases.....	248
Hog Cholera, Details of Work.....	200, 206, 251
Hog Cholera Serum.....	54, 60
Hydrophobia.....	25
Literature, Distribution of, 1913.....	245
Live Stock Estimates, Florida, 1913.....	24
Mail, Outgoing, from Executive Office, 1913.....	67
Mosquitoes, Record of Catches in Traps.....	39
Receipts, 1913.....	63
Smallpox, Reported Cases, Florida, 1913.....	62
Vaccine Points, Distribution of, 1913.....	45
Vital Statistics, Qualified Cities in Florida.....	98
Tallahassee, Report of Sanitary Conditions.....	99
Taylor County, Report of Health Conditions.....	69
Temperature, Monthly Normal and Mean, Florida, 1913.....	
Tick Eradication. (See Cattle Tick Eradication).	
Tick Fever. (See Cattle Tick Fever).	
Transportation, Free to Employees of the State Board of Health.....	28
Tuberculosis:	
Address of Chairman, Section of Preventive Medicine and Hygiene, Southern Medical Association, 1913. (See Appendix).	
Diagnoses by Laboratories by Months and Counties (Insert preceding 65)	18
Report of State Health Officer.....	167
Specimen Examination.....	
Typhoid Fever:	
Diagnoses by Laboratories by Months and Counties (Insert preceding 65)	15
Report of State Health Officer.....	65
Seasonal Prevalence of, in Florida.....	167
Specimen Examination.....	
V	
Vaccine Points, Distribution of, 1913.....	62
Vats, Cattle Dipping, Built in Florida, 1913.....	223

	Page
Venereal Disease, Specimen Examination of.....	168
Veterinarian, Report of.....	194
Veterinary Work.....	27
Vital Statistician, Report of.....	41
Vital Statistics:	
Report of State Health Officer.....	3
Report of Vital Statistician.....	41
Work and Situation in Florida.....	44
Volusia County, Report of Health Conditions.....	110
W	
Walton County, Report of Health Conditions.....	82
Washington County, Report of Health Conditions.....	83
Water Examinations.....	168
Waters, Pollution of Underground.....	30